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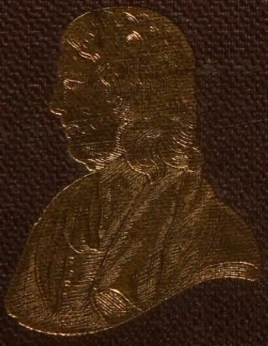

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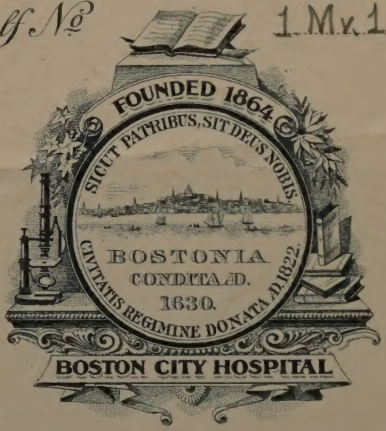

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Date Sept. 1899

THE NEW SYDENHAM SOCIETY.

INSTITUTED MDCCCLVIII.

VOLUME XXVIII.

CLINICAL MEMOIRS

ON THE

DISEASES OF WOMEN.

BY

M. GUSTAVE BERNUTZ,

Physician to *la Pitié*,

AND

M. ERNEST GOUPIL.

Late Physician to the *Bureau Central*.

(Ars tota in observationibus, sed perpendendæ sunt observationes.)

IN TWO VOLUMES.

VOL. I.

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AUTHOR'S PREFACE.

The title of this work clearly indicates that I have no intention of writing a dogmatic treatise on the diseases of women. Indeed I do not think it is possible in the present state of knowledge to write such a work. In saying this, however, I do not wish to pass any criticism upon the treatises which have appeared in Germany and France; my only object is to justify the publication of this work in the particular form which I have adopted. Some, I know, have thought it possible to produce a work, which, in my opinion, ought not to be attempted until a variety of disputed questions of great importance in any dogmatic treatise on gynæcology are satisfactorily settled. For this reason I shall abstain from the discussion of several affections of the generative organs which are at present surrounded by doubt, either because their existence has not been proved by clear evidence; as, for instance, the disease called acute parenchymatous metritis; or because they are met with only in connexion with other diseases, so that the symptoms of each cannot be separated.

It is my intention only to treat of such affections as are undoubted, and whose symptomatology is attested by a goodly number of cases. I take care at once to point out the real scope of this work, in order to avoid any misconception on the part of those who might expect to find in these pages an anatomical classification of diseases. As I have said, I believe this to be impossible of accomplishment in the present state of our knowledge of these subjects.

When I began the work I determined that I would be guided simply and entirely by the teachings of experience; I still think that the best course to pursue, though I did not consider how long a time it would take. I have thought it necessary to study clinically each functional disorder of the genital organs, so as to recognise their various causes, and from observation alone to deduce the symptoms of these several affections. In adopting this course I did not

at first consider the endless difficulties which would arise to hinder me at every step, and after years of labour I have only learned how impossible it is for anyone to describe all the diseases to which women are liable. As far as possible, I have avoided everything that could hinder the accomplishment of my task. I have passed many hours at the bedside in studying my patients, and nights in reading and arranging the materials I had collected. Notwithstanding all this continuous labour, and the valuable assistance of my pupils and friends—especially of him whose name is associated with mine on the titlepage of this work, who, having been my assistant, lived with me at the *Hôpital Lourcine*, and undertook the study of some of the questions which I had not time to accomplish—notwithstanding all this, I say it with regret, that what I have learnt is but a very small part in comparison with what I have yet to learn, or what I know only too superficially to attempt to describe.

At the risk of being considered unmethodical, I have in these pages treated the subjects in pretty much the same order which I followed in my investigations. It seemed to me necessary, in a work of this kind, to treat first of those simpler questions, a knowledge of which will facilitate the study of the more complex. The course pursued in my inquiry was first to study the simpler forms of functional disturbance, for instance, the difficulties of menstrual excretion; these form, as it were, a starting-point of a series of morbid phenomena which are generally understood by pathologists. In the case of congenital imperforation, the symptoms arising from menstrual retention gradually increase in intensity, and they form fit subjects for comparison with analogous cases in which the obstruction is due either to existing or to antecedent disease. By this study and comparison I have been able to trace out the history of the various affections which arise in consequence of this difficulty. The result of my investigations, which I published first in 1848, will form the First Part of the present work. It contains also some account of the two varieties of pelvi-peritonitis, an affection which presents itself at almost every step in gynæcology, and the knowledge of which precedes that of all other diseases of the genital organs; just as the knowledge of pleurisy in the beginning of this century preceded that of pulmonary affections.

Following the subject of dysmenorrhœa, and before entering upon the consideration of the difficulties of secretion which will be found in the second volume, is the general history of pelvi-peritonitis, comprising two perfectly distinct orders of facts. In the one, the inflam-

mation of the pelvic serous membrane is the consequence of effusion of blood into the pelvis from the generative organs; it is indeed subordinate to that effusion, and forms one element only of that complex affection to which I have given the name of hæmatocele. In the other, the inflammation results from a kind of reaction upon the peritoneum from some coexisting disease of the genital organs, probably of an inflammatory character, the latter being overlooked very frequently in the severity of the peritonitis. In the female, this form of peritonitis resembles very much that which, in the male, is described under the term orchitis.

It is necessary, therefore, that the history of pelvi-peritonitis proper, and hæmatocele, should be considered separately, and I shall commence with the study of the latter, as it is more closely connected with the subject of menstrual retention than is the former; this we shall see when discussing the question of intra-pelvic hæmorrhage.

The subject of hæmatocele is, however, so complex, that I have thought it best to subdivide it into two parts. The one comprising only those hæmorrhages which occur in the course of the non-pregnant condition; the other, those which take place during the puerperal state, more particularly in the course of extra-uterine gestation. The former of these, forming Part II., is, together with Part I., entirely the product of my own pen; while the latter, which constitutes the Third Part of this volume, has been written solely by my colleague, M. Goupil, my own share in it being quite insignificant.

Thus arranged, the present volume is complete in itself. The second volume will contain the history of all the varieties of pelvi-peritonitis (spurious peri-uterine phlegmon), together with that of uterine deviations, the latter in the great majority of cases being directly connected with inflammation of the pelvic serous membrane. I need not stay to point out the importance of this latter affection, for it is associated with so large a proportion of the diseases of the female genital organs, that it is impossible fairly to study the history of any one of them without an intimate acquaintance with it.

M. Goupil and I have grouped together all the cases on which this memoir is based; we have carefully dissected all the preparations described therein, and have discussed together the different points in the history of this affection. But as I alone have written that Part, I only am responsible; not merely for its form, but for its substance also, and especially for the views put forth regarding the puerperal

state (*puerperalité*). It is right I should mention this last point in order to save my colleague from any criticisms which my opinions may provoke. On the other hand, the Part on uterine deviations belongs exclusively to M. Goupil. I have no share in that, beyond merely seeing the patients.

From all this it will be understood, that though we have bestowed great care upon this work, we do not pretend to regard it as free from omissions or other imperfections. We think it likely that it may have but a transitory existence, or be merely the starting-point for other works. We can certainly claim to have accumulated cases, and made many bibliographical references, so that those who come after us may be spared considerable trouble, while at the same time they will be in possession of our opinions. The correctness of the references I can guarantee, for I have referred to the original works wherever that was necessary; and when not, I have noted that the reference was drawn from another author: if in any of these latter instances the quotations are incorrect, authors must not blame me for the fault.

I will only add that throughout I have endeavoured to act impartially both to others and to myself, and to lay aside every other feeling except the desire of being useful to the sick. This, I may say, has been the sole motive of my labour.

Amico lectori salutem.

G. BERNUTZ.

EDITOR'S PREFACE.

The original of the present work occupies two volumes of very closely printed matter, together extending to more than 1300 pages. A large part of it consists of the narrative, at considerable length, of cases, some of them original, others quoted from previous authors. The Council of the New Sydenham Society decided that the work was too large to be translated in full, and Dr. Bernutz, the only remaining author, with great courtesy gave his consent to the publication of an abbreviated translation. Of this the present volume is the first and smaller half.

Just before the translation was commenced, the profession had to deplore the death of M. Goupil, one of the authors; a loss to medical science, which those who study the chapters written by him in this work will deeply appreciate.

It should be understood then in reference to my capacity as Editor, as well as Translator of the work of MM. Bernutz and Goupil, that my object has been simply to produce an abridged translation. In accordance with the author's wishes and my own judgment, the process of condensation has been principally restricted to the Cases and notes; the text being given as fully as the space at my disposal would admit of. I have not introduced any new matter, either as notes or otherwise.

The general arrangement as to Chapters, Sections, etc., I have somewhat altered, with the object of giving it more of an English character, and the weights and measurements I have reduced to our English standards.

I may perhaps be allowed to explain the meaning which the authors attach to the terms 'secretion' and 'excretion,' as they are frequently used in these pages, and scarcely in the way we are accustomed to in this country. With us they are sometimes used synonymously; the urine, for instance, is at one time a secretion, at

another an excretion. Generally we call that an excretion, the separation of which from the blood is essential to the maintenance of life, while those products which are separated for some ulterior purpose, as milk, saliva, etc., are called secretions.—Not so, MM. Bernutz and Goupil: in reference to menstruation, the product itself, they designate by neither term, the act of separation from the uterine glands and vessels they call the menstrual secretion, and its further escape from the uterine and vaginal canals, they term the menstrual excretion. So that in both cases it is not the product, but the escape of that product that is called after those terms.

I venture to hope that the publication of this work will direct the attention of English Physicians more pointedly to the diagnosis of the affections herein discussed. From my own observation I am satisfied that hæmatocele though not common is certainly by no means so rare an affection or symptom as is generally supposed, nor, in many cases, is the diagnosis a matter of much difficulty.

The careful study of the history of those affections which eventuate in hæmatocele, as well as of the coincident symptoms, is of more value I believe in diagnosis than even vaginal examination.

I am conscious of many defects in the way I have performed my task, for which I must crave the indulgence of my readers. On subjects so important as those treated of in these pages, condensation is not always an easy matter.

ALFRED MEADOWS.

George Street, Hanover Square.

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PART I.

MENSTRUAL RETENTION.

CHAPTER I.

GENERAL OBSERVATIONS.

The various anomalies of menstruation have reference either to the act of secretion or to its excretion, and these constitute two series of pathological facts which, notwithstanding the many symptoms they possess in common, should be carefully distinguished from one another, in order that the different affections to which women are subject in amenorrhœa, may be correctly appreciated. I propose, therefore, to consider, first, the various causes which may impede the menstrual flow; and, secondly, the accidents resulting from this defective excretion.

To understand the pathology of dysmenorrhœa, a few words are necessary on the physiology of menstruation. An active congestion of all the generative organs is the first phenomenon of menstruation; then, the free extremity of the Fallopian tube embraces the ovary, and is sometimes even united to it by a thin transparent membrane, as is seen in the cases mentioned below.* Soon the cavity of the tubes is dilated by a bloody mucus which mixes in the uterus with the blood exhaled from its cavity, now lined by an imperfect decidua, and then escapes by the open cervix.

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* J. E. Panck. *Entdeckung der organischen Verdibung zwischen Tuba und Eirstock beim menschlichen Weibebalch nach der Conception.* Dorpat, Leipzig, 1843. (*Extrait des Archives générales de médecine*, 4e série, t. iv. p. 81.) :—

J. K., aged 23, died from the inhalation of carbonic acid gas. On opening the abdomen, the genital organs were seen to be much congested. The right Fallopian tube was thrust forward and attached to the ovary, not merely by mechanical union, but *by an organic connection in the shape of*

The object of these occurrences is, on the one hand, to secure the independence of the abdominal cavity from the generative tract during menstruation; and, on the other, to establish a freer communication along that tract than exists at other times. They prevent the flow of the menstrual fluid into the peritoneal cavity, and facilitate the passage of the ovule with the fluid, which serves as a vehicle for it.

It is evident then that menstruation requires for its normal performance the concurrence of several phenomena, and should any fail, more or less severe accidents result, the true cause of which must be known in order to arrive at a correct line of treatment. Practitioners in the present day direct their attention exclusively to the congested state of the organs. They recognise in this, if not the first step of inflammation, at least, a condition so allied to it that, in their opinion, a very slight cause develops it. I by no means dispute the frequency of inflammation of the uterus or its appendages, and the reaction of these affections on the pelvic peritoneum when the congestion deviates from its normal type. Nor do I deny the occurrence of phlegmons of the broad ligament;* but I believe that in many cases morbid congestion or inflammation is secondary to defective excretion, and ought to be attributed to the action of the retained fluid, and the reaction of the organs which expel it. It appears to me that in these cases the earliest indications of mischief are caused by the retention of the fluid, which, though imperfectly secreted and not outwardly visible, is nevertheless there. The symptoms ought therefore, in my opinion, to be referred to menstrual retention, and not to any defect in the secretion.

The proof of this is seen if we compare the symptoms which

---

a thin transparent membrane; the left tube was not in contact with the ovary at all.

Case of M. A. Puech. *De l'hématocele péri-utérine et de ses sources.* Obs. 18., p. 71. Montpellier, 1858.

S. P., aged 38, died suddenly of meningeal hæmorrhage.

The right Fallopian tube was found adherent to the corresponding ovary. The left was also adherent to the left ovary, by a tubular membranous union five lines long. This tubular canal served as a conduit from the one to the other, and was filled with blood. The space on the surface of the ovary, which it enclosed, presented no rupture, either of long standing or otherwise, but two Graafian vesicles, one of which was on the point of rupturing. Both ovaries, but especially the right, presented abundant evidence of past ovulation. The uterus presented the characters of a multipara.

* Gendrin, *Thèse inaugurale de Satis.* Paris, 1847.

actually occur with those which theoretically should result from an obstruction of the cervix uteri. If the discharge does not appear while the act of secretion continues, even imperfectly, it soon occasions more or less repletion of the secreting cavities, characterised by a sense of fulness, of weight and distension, and some phenomena of uterine reaction. These dysmenorrhœic phenomena are analogous to the symptoms of congestion, generally supposed to be the cause of these accidents; but in the case of retention all these symptoms disappear as soon as the flow is re-established.

But if, on the contrary, the flow is not established, the secretion increases, and with it the distension of the uterus and Fallopian tubes. The uterus, however, by the thickness and contractility of its walls, offers some resistance, and forces the incompressible liquid into the unresisting tubes. This gives rise to symptoms resembling very closely those resulting from phlegmons of the broad ligament, with which it has often been confounded.* This mistake is the more likely to occur, because the mere fact of distension sometimes gives rise to inflammation, and the attention is concentrated upon this secondary affection. Other changes not infrequently result from the inflammation, which require a longer time for their disappearance; and, meanwhile, the continuance of the flow relieves the symptoms caused by the distension.

If, however, the affection is carried a stage farther, or if the union between the tube and the ovary is feeble, we can understand how the catamenial fluid is extravasated into the abdominal cavity, and sets up inflammation of the peritoneum, which may remain partial, as most frequently happens, or it may invade the entire serous membrane. Under these circumstances, there is superadded to the menstrual retention an element, the severity of whose symptoms so mask the original disease, that the case is either regarded as one of simple peritonitis when general,† or, if partial, as a circumscribed effusion of blood, which, since the publication of my memoir in 1848, has received the name of *hæmatocele*.‡

We can understand that so long as this new element remains in the acute stage it will prevent the excretion of the menstrual

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* Gendrin, *Thèse de M. Verjus.* Paris, 1844.

† Chomel, *Dictionnaire de médecine*, en 30 vol., t. xxiii. p. 578.

‡ Nélaton, 1851. *Leçons orales sur l'hématocèle, faites à l'hôpital des Cliniques et recueillies par MM. Bauchet et Gaillet.* (*Gazette des hôpitaux*, 11, 13, *et* 16 *décembre*, 1851 ; 29 *janvier et* 10 *fevrier*, 1852.)

fluid, which can only take place after the subsidence of the peritonitis; when menstruation occurs it exercises a beneficial influence on the peritoneal lesions by relieving the distension of the generative organs. But the return of the excretion cannot always disperse the last traces of peritonitis, which will sometimes remain and expose the patient to a repetition of dysmenorrhœic accidents similar to those which occasioned the peritonitis.

Cases of this kind, then, present three characteristic degrees; first, repletion of the secreting cavities; second, distension and reaction of the uterus and tubes; and third, rupture of the union between the tube and the ovary, and the passage into the abdomen of a part of the blood which distended the generative organs.

But should rupture not take place, or if it occasions only a partial peritonitis, the orgasm will in a short time diminish, and a new series of phenomena result, consequent upon the changes occurring in the fluids and their containing cavities, natural or artificial. Hence, concretions of blood,* dropsies of the uterus and tubes, or tubo-ovarian cysts † may be the direct results of retention; while metritis, phlegmons of the broad ligaments and iliac fossæ, may occur indirectly.

Perhaps I have already dwelt at too great length upon the reasons which seem to establish a pathological relationship between narrowing of the uterus and those accidents which have hitherto been thought to arise from congenital or acquired occlusion of the uterus or vagina. But I have thought it right to do so because the symptoms resulting from occlusion are so very similar to those of dysmenorrhœa, that it is surprising that observers have sought rather to dissociate these two affections than otherwise.‡ My discovery of the etiology of this affection was quite accidental. I chanced to see stretching across the floor of the pelvis a clot of blood, and this led me to the opinion that there were other forms of amenorrhœa from retention than those previously recognised. The following case was, as it were, the *point-de-départ* of this work:—

Case I.—*First symptoms with the non-appearance of menstruation; increased in severity in the absence of any discharge during the*

* Boivin et Dugès, *Maladies de l'utérus*, t. ii. p. 409.

† *Idem, ibid.*, t. i. p. 266.

‡ Désormeaux et P. Dubois, "Aménorrhée." *Dict. de méd.*, 2nd edit. t. viii. p. 361.

four following months ; fatal peritonitis.—Recent and old-standing alterations of the peritoneum ; tumour formed by hypertrophy of the uterus, by dilatation of the tubes and their adhesion to the ovaries, by the intestine and sigmoid flexure all united together.—Liquid blood in the uterus and right Fallopian tube ; large clot in the pelvic cavity.

F. B., aged 40, was admitted into the Hospital S. Antoine, August 13th, 1844. She began to menstruate at 18, and had continued regular every three weeks for about three days each time. Had been pregnant seven times, but aborted five times at about the sixth month. The two last were born at full term ; and since then she had had good health. Her present illness she attributes to carrying heavy weights in the spring. Menstruation did not appear in June, and she suffered much in consequence in the lumbar and pelvic regions. Early in July expulsive pains were felt across the lower part of the abdomen accompanied by nausea, with vomiting and fever ; leeches were applied to the anus and blisters to the iliac fossæ ; this gave some relief, but the expulsive pains remaining, baths were used up to the 20th of July. While in a bath that day, after some severe pain, she expelled a membranous clot, which was followed by smart hæmorrhage ; ever since then a sanguineous discharge with expulsive pains had existed. There had been more or less fever, and in the last few days the pains which had diminished have increased.

On admission she was pale, anxious, and emaciated ; no sickness ; urine normal. Abdomen distended towards the lower part, especially in the iliac fossæ ; very tender on pressure. Uterine and lumbar pains intermitting. Occupying the whole of the lower part of the belly was a trilobular non-fluctuating tumour, extremely tender to the touch. Pressure upon it caused a renewal and increase of the pain, starting from the lumbar region and extending into the uterus ; it resembled both in severity and intermittence the pains of the first stage of labour. The left portion of the tumour extended about two inches above the Fallopian ligament, the right one inch above the corresponding ligament. Uterus large and heavy, situate low down and near the pubis ; could be lifted slightly upwards but not from side to side ; the cervix was the size and form of a hen's-egg ; the os swollen and patulous ; the discharge constant. Vaginal examinations very painful ; pulse 72 ; skin natural ; ordered vegetable diet, poultices to the abdomen, and baths.

21*st.*—Discharge increased. The pains are still very severe ; the

tumour was thought to have diminished somewhat, and to be indistinctly fluctuating on the left side only. The cervix was lower in the vagina, closer to the pubis, and slightly arching with the concavity upwards. Three liquid evacuations. Micturition frequent, but not painful.

26*th*.—The uterine pains have been relieved by the discharge of yesterday. Tumour diminished in size and less tender; fluctuation distinct at the sides, not in the middle; cervix uteri sufficiently open to admit the finger, marked anteflexion; slight diarrhœa. Treatment continued as before, pulse 72, no fever.

27*th*.—Pain greatly increased after the examination yesterday; condition otherwise the same. After the visit she was seized while in the bath with violent pains; no rigors. In the evening the pains increased and her general condition was much worse; forty leeches were applied to the abdomen followed by fomentations: this gave slight relief, but in the morning she was much worse; face pinched and anxious, eyes sunk, great thirst, tongue red, vomiting incessant, abdomen considerably distended; pain slightly diminished, but increased with the least pressure, defæcation painless; tumours much the same; pulse small, jerking 110; skin hot and dry; ordered, castor oil, lemon drink, fifty leeches and poultices to the abdomen.

29*th*.—Much worse, pain and tenderness increased; abdomen more distended, pulse imperceptibly quick; ordered a large blister to the abdomen. The vomiting is almost constant, nothing can be retained on the stomach. No diarrhœa.

30*th*.—Expression cadaveric, abdomen extremely tympanitic; vomiting; blister re-applied. She died at mid-day.

Post-mortem examination, forty-six hours after death.—General peritonitis of recent origin; slight serous effusion. On examining the pelvis two tumours which seemed to be ovarian were seen; the uterus was partially twisted round with its left border at the symphysis pubis, its right corresponding to the right sacro-iliac joint; the posterior surface of the uterus was close to the left ovarian tumour; the uterine walls were thickened to three times their original size. The tumours, to which we had improperly given the name of ovarian, were of different size—the right was the size of a hen's-egg, reddish-brown in colour, and irregularly villous. On opening this cyst, its cavity was found to communicate with that of the uterus through the Fallopian tube, the orifice of which in the uterine wall only admitted a small stilette, but immediately

enlarged into a pouch, part of which was formed by the anterior surface of the ovary, to the circumference of which the fimbriated extremity, slightly folded on itself, adhered; the union was so firm that traction caused a laceration of the cyst. It contained a liquid resembling a mixture of blood, pus, and brown clots of a jelly-like consistence, while the intra-uterine portion of the tube contained blood. The other tumour was the size of a turkey's-egg, the surface covered with false membrane; the cavity contained clots, some recent, others firm and fibrinous floating in a brown liquid A fine stilette, introduced through the uterine orifice of the left Fallopian tube, entered the cavity of the cyst. The calibre of the tube presented a considerable dilatation at its outer part, where it formed a portion of the cyst; the latter was formed by a part of the broad ligament, the ovary, the false membranes which united them together, and by the parietal peritoneum; the inner wall of the cyst presented a fungous appearance. Careful examination failed to discover any communication between the pouch and the abdominal cavity; deeper in the pelvis on the left side was a conical clot of blood, three inches long, one inch wide, firm, especially at its lowest part, where it presented a pale-rose colour: this clot almost entirely filled the left side of the pelvis; a little fluid surrounded it; the right side of the pelvis contained fluid only. The walls of the cavity presented villous excrescences, soft and friable, growing from a substance, which by its colour, consistence, and texture, resembled cartilage, and in which it was impossible to discover any peritoneum. In no part of the pouch could any open vessel be discovered, still less could any vessel be detected in the cartilaginous structure. All the thoracic organs were quite healthy. The urinary organs were also quite healthy.

In order correctly to appreciate the importance of this case, which I have detailed at some length, we must compare the anatomical changes found after death with the symptoms observed during life, and classify them under their several heads. First, as regards the anatomical changes in the peritoneum; these were both recent and of old standing; the former occurred probably on the 27th of August when the severer peritoneal symptoms set in; the latter most likely related to symptoms which occurred two months before death. As regards their cause, we may I think attribute the two attacks of peritonitis to the very complex nature of the disease, in which not only was the uterus considerably enlarged, but two encysted tumours existed, one

on each side, that on the right being caused by adhesion of the ovary to the dilated tube; that on the left to the interposition of false membranes between the borders of the enlarged fimbriated extremity of the tube and the neighbouring parts; the general character of the changes in the generative organs prove that they were not of very recent date. The hypogastric tumour, the fixity of the uterus, its increased size and weight, and the prolapsed cervix; the functional disturbance, the sense of weight in the pelvis, the uterine spasms, the stoppage of the menstrual excretion followed by the expulsion of a clot, and subsequent sanguineous discharge; all these sufficiently demonstrate the seat of the affection, though they leave its nature still a matter of uncertainty.

The real character of the disease is, however, rendered more apparent by the nature of the *post-mortem* appearances, for the induration of the hypertrophied uterus, the false membranes which formed the ovarian tumours, the villous condition of the inner surface of those tumours, and the puro-sanguineous serum which they contained could only be regarded as evidence of acute inflammatory action of long standing. It did not, however, appear to be of primary origin; on the contrary, it would seem to have resulted from the presence of a foreign body against which the uterus exhausted itself by fruitless efforts at expulsion. The sense of weight in the pelvis, the intermitting pains resembling those of labour, which came on three years after an artificial delivery, without any assignable cause, in the place of ordinary menstruation, have nothing which incontestably connects them with uterine inflammation. The earlier symptoms are, on the contrary, satisfactorily explained by the menstrual retention, produced in the same way as retention of urine from enlargement of the prostate. The increased volume and weight of the organ was due to the retention of blood in the uterine cavity, consequent on the swollen condition of the cervix, and the expulsive efforts were attempts to terminate this state of things. But these symptoms also bear another and more evident interpretation. For instance, they maintained the same character to the end of the month, when the second period should have occurred; then they assumed greater intensity and the first attack of peritonitis, accompanied by swelling of the iliac fossæ, supervened. As soon as this subsided, the hypogastric weight, and the uterine pains, which had ceased for a time, reappeared during the second month, more marked even than in the preceding, and lasted till July 20th. Then she experienced a great accession of pain, which

ended in the expulsion of a clot of blood, and was followed by some slight improvement. Still the pelvic weight and the uterine colic remained, while the hæmorrhage gave place to a slight discharge of blood which continued till the fourth menstrual period. At that time the patient became worse, but not till seven or eight days after did the more severe symptoms set in, which ended in fatal peritonitis.

Thus the symptoms which might lead us to suspect metritis, though they may equally occur in cases of uterine enlargement, here assume a very decided character, increasing at each catamenial period by the non-excretion of the menstrual fluid. Nor did they show any abatement till some discharge had taken place. This improvement, however, was but slight and transient; for after the fourth period the mischief showed itself in a more aggravated form.

Concurrently with these symptoms due to periodical enlargement of the uterus, there are others which suggest an abortion rather than metritis: for instance, violent and intermittent uterine action, together with sanguineous discharge. In short, it seemed like an abortion with this peculiarity, that it persisted for three months, the body to be expelled increasing in size each month. Moreover, the expulsive effort was fruitless so long as the cervix refused the passage of the fibrinous clot, and it cannot be doubted that the induration of the hypertrophied cervix offered too great an obstacle to the expulsive power of the uterus. The idea of a miscarriage is, however, negatived not only by the length of time and irregularity of the return of the expulsive effort, but by the fact that no product of conception was discoverable after death. The only foreign element found either in the uterus, the tubes, or the peritoneum, was blood. In the right ovarian tumour there were about two spoonfuls of blood, with some recent clots; in the left, which was formed chiefly of false membranes, there was three times the quantity of blood, with some almost colourless clots. In the uterus the quantity was very small and red. It is important to note these differences in the character of the blood, as they indicate corresponding differences in the age of the several deposits, according to the menstrual periods the excretion of which was prevented.

But had the blood which was formed in the abdominal cavity the same origin? The different characters which this presented warrant a similar explanation to that given above. Thus the fluid blood and purulent serum contained in the abdominal and pelvic cavities with

the upper layer of the pelvic clot, would appear to be the result of a recent hæmorrhage, while the lower and almost dry portion of the same clot would be the result of a previous loss. These characters correspond very closely, the one with the product found in the right ovarian tumour, the other with that of the left, and thus a connection is established between these intra-genital and intra-abdominal blood-clots on the one hand, and between these and the two peritoneal attacks on the other. In short, the coincidence of the peritonitis with the menstrual epochs and the effusions of blood, justify the belief that the latter were in reality the cause of the former. At any rate there was no hæmorrhagic diathesis, nor any rupture of blood-vessel to explain it. Nor could it have resulted from any menstrual metastasis, for the existence of collections of blood in the generative organs negative such an idea. The situation of the effusion and the disposition of the tumour on which it was, so to say, implanted, show whence it came.

In all probability, at the time when the inflammation was developed, the left tube and ovary had ceased to be united, and this disunion afterwards repaired, by the organization of false membranes, allowed the passage into the abdomen of a part of the menstrual secretion. This formed the first pelvic effusion, and thus occasioned the first attack of peritonitis. In like manner, I believe that the later hæmorrhage was due to a laceration of the left ovarian cyst, not only because of the diminution in size which the tumour underwent some hours before the development of the last peritonitis, but also on account of the situation of the pelvic clot.

From a review of all these phenomena, I think we are entitled to conclude, that in this patient the cervix, though not obliterated, was enormously increased in volume, either by chronic inflammation, or by simple hypertrophy, the result of an artificial delivery; that this increased volume presented an obstacle to the escape of the menstrual secretion similar to that which occurs in prostatic enlargement. The retention of four successive menstrual products brought about the following results:—

At the first period, repletion of the genital organs which reacted upon the foreign body.

At the second, distension of the cavities, the formation of hypogastric tumours, and, at last, the passage of blood into the abdomen, which occasioned the first attack of peritonitis.

At the third, a futile attempt of the generative organs, which showed itself by a long-continued discharge of blood.

At the fourth, fresh distension of the cavities leading to regurgitation of blood into the abdomen, and consequent peritonitis, ending rapidly in death.

Lastly, this retention gave rise to the formation of three blood-cysts, the contents of which varied according to the duration of the deposit: but they all resembled very much, both in structure and situation, those cysts which have been arbitrarily called encysted dropsy of the ovaries, though, in reality, the ovary has very little to do with it.

Having given some little consideration to the several elements in this case, I am satisfied that the diseases under which this patient suffered were all attributable to the retention in the generative organs of the menstrual products which they were unable to expel. I have also been led to group together the several affections which heretofore have been regarded as idiopathic, and have been ranged under distinct classes, without regard to the circumstances under which they occur, such as uterine congestions;* metritis;† phlegmons of the broad ligaments;‡ ovaritis;§ peritonitis;‖ fleshy moles;¶ and dropsies;** whether of the uterus, the tubes, or the ovary. I have endeavoured to establish that all these are but different phases of one pathological order, all resulting from disturbance in the ordinary process of menstrual excretion.

Reflecting upon this case and the mode of production of the more prominent symptoms, I have been led to a classification of the different varieties of this affection from a study of its natural history. The excretion may, for instance, be prevented by the impermeability of the vulvar or vaginal orifice, by abnormal conditions of the cervix or body of the uterus, or of the tubes; and thus, as Galen pointed out, an analogy is apparent between menstrual and urinary retention.

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* Duparcque, *Traité des maladies de l'uterus*, t. 1, p. 6.

† Verjus, *Thèse inaugurale*. Paris, 1844, p. 37.

‡ Satis, *Thèse inaugurale*. Paris, 1846; p. 83-89.

§ Chéreau, *Mémoire pour servir à l'histoire des maladies des ovaires*, passim.

‖ Chomel, *Dict. de méd.*, 2e edit. *Peritonite*, t. xxiii. p. 500.

¶ Boivin et Dugès, *Maladies de l'utérus*, t. ii. p. 409.

** Ibid, t. i. p. 266.

CHAPTER II.

THE CAUSES AND VARIETIES OF MENSTRUAL RETENTION.

In consideration of the various conditions which prevent the free escape of the menstrual fluid, we may divide these cases into eight different classes.

In the *first*, the excretion is prevented by a congenital or acquired imperforation of the vulvo-uterine canal before the age of puberty.

In the *second*, by cicatrices rendering the passage impermeable after the age of puberty.

In the *third*, by congenital contractions or cicatrices of the vagina or cervix.

In the *fourth*, by increased volume of that organ whatever may have been the cause.

In the *fifth*, the excretion is temporarily prevented by the interposition of adventitious deposits, either in the cavity or in the body of the uterus; polypi, pseudo-membranous dysmenorrhœa, &c.

In the *sixth*, it is arrested by uterine deviations, especially by flexions of that organ from whatever cause.

In the *seventh*, by spasmodic contraction of the excretory canal itself, or, at least, of the most important part of it, that is to say, the cervix.

Lastly, in the *eighth*, which is less known than any of the other varieties, the disturbance is due to an abnormal condition, congenital or acquired, of the Fallopian tubes.

SECTION I.—MENSTRUAL RETENTION FROM CONGENITAL OR ACQUIRED IMPERFORATION OF THE VULVO-UTERINE CANAL, BEFORE PUBERTY.

This variety, which was investigated some time since,* presents several modifications as regards situation and extent. Instead of

* Benevoli, *observations, notamment la deuxième:* Delpech, *Mémorial des hôpitaux du Midi*, t. ii., année 1830, p. 479, colonne 1re.

describing minutely each of these, I shall select those only which possess the greatest interest for our subject, referring by notes to those of less moment.

There are four modifications of this first variety having reference to the seat of obliteration. Thus :—

α In the first, it is due to a defect of the separation of the external genitals.

β In the second, to an imperforate hymen.

γ In the third, to absence or obliteration of the vagina.

δ Lastly, to imperforate cervix uteri.

α The first and the simplest, of these obliterations which may be found described by Ruysch and Delpech,* is caused by congenital defect in the separation, or subsequent agglutination before puberty, of the external genitals.

β The second and most frequent of all is caused by imperforate hymen. There are so many cases of this kind that I shall not even give references to them, but content myself merely with mentioning three; one of which I must refer to in a note,† notwithstanding the interest which attached to it from the peculiar position of the obstructing hymen, in order to direct more particular attention to the two others, which present a very close analogy with the case first described, page 4.

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* Ruysch (1691). *Observationum Anatomico-chirurgicarum centuria*, Obs. 32_e, p. 42.

Obs. de Delpech, *Mémorial des hôpitaux du Midi*, 1830, p. 479 :— J., after having absconded from home at the age of 14, was found in a house of ill-fame, and on examination some ulcerative excrescences were seen round the margin of the anus and vulva. Further examination, however, showed that the vagina was occluded by a thick membrane. The abdomen was swollen and tender, and there was some slight fluctuation to be felt behind the vaginal membrane. This, coupled with her previous history, led to the diagnosis of menstrual retention. Accordingly my friend Dr. Morrel agreeing with me, I made an incision perpendicularly for about an inch and a-half, from the meatus urinarius to the perineum. On passing the finger up the vagina, the uterus was found a good deal enlarged, and the os closed by a second membrane. This was divided, and a quantity of brown sero-sanguinolent fluid escaped, it was inodorous and measured about six or eight ounces. Warm water injections were used, and tents to the vulvar incisions. Hip-baths, and lead lotions were afterwards employed, and a mercurial course of treatment adopted for a time, till chalybeates could be given to facilitate normal menstruation.

The patient ultimately made a good recovery.

† Obs. de de Haen. *Ratio medendi*, p. vi., t. iii. p. 38. Didot, 1764.

CASE II.*—*Complete congenital imperforation of the hymen; menstrual retention from the thirteenth to the twenty-second year; dilatation of the vagina, uterus and Fallopian tubes; incision of the hymen; peritonitis on the fifth day; death on the ninth day.—Intra-peritoneal effusion of blood from the dilated Fallopian tubes.*

A young lady, aged 22, had never menstruated, but had suffered since she was 13 years old from symptoms of menstrual retention, which were aggravated every month. The abdomen was distended and tender. On examination, the hymen was found to be imperforate, and fluctuation was detected behind it. The membrane was crucially incised, and a black fluid escaped. For three days all went on well; but on the fifth day peritonitis came on, and she died on the ninth day.

On making a *post-mortem* examination, there was found general peritonitis; great distension of the uterus and vagina; the Fallopian tubes were tortuous at the uterine end and distended with black blood, and at the ovarian end slight pressure forced it out of the tube. Some of this fluid was seen in the pelvic cavity, and in that situation the peritonitis was most evident.

CASE III.†—*Congenital imperforation of the hymen; menstrual retention from the thirteenth to the seventeenth year; dilatation of the vagina, uterus and Fallopian tubes; incision of the hymen; fatal peritonitis on the fifth day.—Intra-peritoneal effusion of blood from a tubo-ovarian cyst.*

M. W., aged 18, had never menstruated; had suffered from symptoms of retention for more than a year. The abdomen was large, tender, and fluctuating; the vagina was occluded by a membrane; fluctuation was felt behind it. On October 14th, 1852, the membrane was punctured, and three or four pints of thick black fluid escaped; peritonitis supervened on the 17th, and she died in four hours.

On making a *post-mortem* examination, there was found to be general peritonitis; a pint and a-half of black fluid was discovered in the pelvis, of the same kind as was evacuated during life *per vaginam*. The uterus was enlarged to three times its natural size, as were also the

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* Marchand et Massé, *Journal de médécine de la Loire-Inférieure*, t. xxvi., 131e et 132e livraison. *Extrait Archiv*, 4e serie, t. xxvi. p. 353.

† Th. Paget, Leicester. *Brit. Med. Jour.*, July 23, 1859. Case I.

Fallopian tubes and ovaries; the latter had formed tumours, each of which had ruptured and the fluid escaped.

I need not analyze these two cases to show the complete analogy which exists between them and Case I. It is sufficient to compare them all to be convinced of the great similarity which will be found in a large number of cases of menstrual retention resulting from congenital or acquired imperforation, and especially among those of my third variety of this class.

γ The vaginal malformations which constitute this third variety offer sufficiently marked differences to be divided into three subdivisions, comprising—1, cases of absence of the vagina; 2, congenital obliterations of this canal; and 3, cases of double vagina, one side of which is imperforate. The first of these varieties is by far the least frequent. It comprises cases in which there is such a complete absence of the vagina that the bladder and rectum form one pouch. One such I saw in 1856, and in that I followed the practice recommended by Amussat in the case recorded below.*

* Obs. d'Amussat, Séance de l'Institut, 2 Dec. 1835 (*Gaz. med.*, 1835, p. 785 et 817),—

A young girl, aged 15, came under notice in February, 1832, suffering from menstrual retention. At 13, she first experienced some colicky pains, which were thought at first to be due to intestinal obstruction; but as they recurred in a month and the abdomen began to swell, Dr. Langenbeck was consulted, when he discovered that there was imperforation of the vulva and absence of the vagina. The symptoms recurring every month, she came to Paris. It was then found that the abdomen was distended to the extent of a six months' gestation by a tumour, hard, tender, and situate in the mesial line. The external genitalia were well formed, but there was no vaginal orifice; the position of the vagina being covered with mucous membrane, in the centre of which was the meatus urinarius. Examining *per rectum*, a tumour could be felt filling up the pelvis, it was tender and fluctuating. It was clear, therefore, that there was a menstrual accumulation in the uterus which had been collecting about two and a-half years behind a congenitally deficient vagina. The bladder and rectum were quite healthy. In a consultation that was held, I proposed to attempt to reach the uterus by separating the bladder from the rectum with the finger, and not to use the knife. M. Magendie recommended puncturing the uterus *per rectum*, to which also M. Marjolin agreed. M. Boyer advised that nothing should be done, as such operations always ended fatally.

On February 29th, I commenced the operation by forcibly separating the bladder from the rectum as proposed. Having partly succeeded, I introduced a sponge tent. Three days after I repeated the process, pushing the finger firmly onwards in the *cul-de-sac*, while the bladder and rectum

In the following case of de Haen, instead of attempting to sepa-

were drawn apart by an assistant. This proceeding, though very painful, was also very efficacious. On the 4th March the operation was repeated, the sponge tent in the intervals being kept in the opening. On the following day *I reached the tumour*, it was bulky, fluctuating, and filled up the cavity of the pelvis. The artificial canal now measured two and a-half inches. Two days afterwards it only measured two inches, but I could not tell whether or no this was owing to enlargement and depression of the tumour, or to contraction of the artificial vagina. On the 8th, the patient was restless, and in pain. On the 9th, the operation was completed, the tumour was then pressing down to within two inches of the vulva. A trocar was introduced, and a few drops of black blood escaped. I then used a bistouri; the tissues were extremely hard; some thick, black, gluey sort of fluid flowed out. I endeavoured to introduce the finger, but failed, and again had to resort to the knife to enlarge the opening. Now I could introduce the finger into the cavity, which seemed like that of a uterus at full term; the pain was extreme. About ten or twelve ounces of fluid came away. Into the opening a large gum elastic canula was introduced and there fixed. On the 10th she had passed a good night, had voided urine several times, was not in much pain, no fever, and the discharge continued. Next day there was a good deal of irritative fever, but she was otherwise fairly well; the tumour was well washed out with tepid water. On the 12th she was very weak and feverish, and complained of much pain in the left iliac fossa, for which ten leeches were ordered and some mercurial inunction, which greatly relieved her. On the 13th, the leeches, fifteen, were repeated over a hard swelling which could be felt in the left iliac fossa. She was better next day, but the uterus felt hard *per rectum*. On the 16th, salivation being accomplished, the mercurial inunction was stopped. On the 18th, while the bowels were acting, a large quantity of bloody fluid, exactly like that which came from the uterus after the tapping, passed, and this discharge continued for several days. After this she gradually improved, and she left Paris on April 23rd. On the 25th she menstruated for a few hours only. Two days afterwards she was seized with severe pain, and then menstruation came on vigorously, she passed a large quantity of thick blood and clots like liver. All went on well till September, when she again had an attack of pain like that experienced before the operation, and after it a glairy sanguineous discharge took place. In November the pain came on again, and leeches were applied. After this, menstruation came on regularly, and she regained her health.

She was examined two years after the operation; the artificial vagina was very small, and though a hard body, supposed to be the uterus, could be felt, no orifice could be discovered. By an unfortunate misunderstanding, the sponge tents which had been ordered for the artificial vagina, were introduced into the meatus urinarius with very great pain to the patient, and with the result of dilating that part considerably. Ultimately, however, she got quite well, and menstruated regularly.

rate the bladder and rectum with the finger, the knife was employed, and the bladder opened. The case is, therefore, interesting on this account, and also for anatomical connections, in which respect it very closely resembled the first of these cases.

CASE IV.—*Absence of the vagina; symptoms of retention beginning at* 16 *and increasing gradually; operation at* 24; *the bladder laid open; death on the third day afterwards*; *autopsy.—Rupture of the Fallopian tubes; effusion of blood into the abdominal cavity from the distended uterus and Fallopian tubes.*

CASE IV. of de Haen, *loc. cit.*, part VI., vol. iii., p. 32. A young girl, age 24, had suffered from symptoms of retention of the menses since she first began to menstruate at 16 years of age. On examination there was found to be complete absence of the vagina, and as the symptoms of retention became more and more urgent, it was decided that an operation should be performed, which was accordingly done on the 25th January, 1761, the patient then being in her 24th year. The knife was used for the purpose of cutting a way into the uterus, but the operation was unfortunately unsuccessful, and in the attempt to reach the uterus the bladder was laid open. Death took place three days after. On making a *post-mortem* examination, the Fallopian tubes were found to be both ruptured, both they and the uterus having undergone extreme distension. A considerable quantity of bloody fluid was found effused into the peritoneal cavity.

I will only make one remark in reference to this case, and that is by way of warning against the employment of the knife in these cases, instead of using the finger, as in the case recorded by Amussat. The difference in the relative mortality of these two proceedings has induced me to separate cases of congenital absence of the vagina, requiring the process of separating the parts by means of the finger, from other cases of fibrous obliteration, congenital or acquired, in early life, for which the knife alone must be resorted to, although it is always under circumstances of extreme danger.

These fibrous obliterations sometimes occupy the whole vagina, as in the case of M. Debrou;* sometimes, on the contrary, they

* Obs. de M. Debrou, *Gaz. méd.*, 1851, p. 32. L., aged 19, began to have symptoms of menstruation, but without any discharge, at 17. These

only occupy a limited portion of that canal, and more frequently it is the middle than any other part, as was pointed out by M. Debrou in the remarks appended to his case, to which I would refer those who wish particularly to study obliterations of the vagina, not only on account of the interest of his remarks, but also for the bibliographical notices there given.

The three following cases, with their *post-mortem* examinations, all exhibit the same deformity; viz., dilatation of the tubes, and the escape through them into the peritoneal cavity of the blood contained in the genital organs.

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symptoms continued for two years, and her general health began to suffer. On examination, a tumour was felt in the right side the size of an egg, and in the centre of the pelvis a larger one, both were tender to the touch. The external genitalia were intact. By the rectum a tumour was felt filling up the pelvis, hard, elastic, and fluctuating. In the place of the vagina was a firm, tense, fibrous structure three or four lines thick. Accordingly, on the 22nd February, 1847, an operation was performed. With one finger in the rectum, a bistouri was passed up along the fibrous septum, which was found to be very hard and dense. At the distance of two inches from the vulva a solid round body was felt, but into it no orifice could anywhere be found. It was accordingly punctured, and a large quantity of semi-coagulated blood came away. The wall of the uterus was very thin, quite unlike that development which takes place during gestation. She suffered a good deal that night, and was worse next day, with symptoms of inflammation and fever; for this she was bled from the arm, which greatly relieved her. She continued to improve up to the 20th March, when symptoms of menstruation came on; they passed off, however, without any appearance. On the 26th April, a band was found stretching across the os uteri, which was accordingly divided; next day a considerable quantity of blood escaped. This proved to be ordinary menstruation. After this, for several months, no menstruation occurred, and in March, 1848, I was again consulted, when I found the uterus much distended, and a tumour in the right iliac fossa. No opening into the uterus could be felt. On the 29th the uterus was again punctured, and a quantity of fluid blood evacuated. Menstruation came on again in May, and continued every two months. I saw her again in February, 1849, she was then in good health, and had a well-formed vagina; the os was small and circular. A few days after that she married, and immediately became pregnant. She was delivered on the 2nd November. After having been in active labour for six hours, the orifice scarcely dilating at all, she was seized with violent convulsions; for this she was bled, and afterwards delivered of a dead child by means of the forceps. For a few days all went on well, but on the 6th metro-peritonitis came on, and she sank on the 10th. No *post-mortem* examination was allowed.

CASE V.*—*Congenital obliteration of the vagina; puncture; fatal peritonitis; escape of menstrual fluid into the peritoneal cavity from the uterus, through the Fallopian tubes.*

Cases of congenital obliteration of the vagina, says Sir B. Brodie, are more common than is supposed; I have seen four cases of occlusion of the vagina, which are commonly described as imperforate hymen. Once a patient consulted me at St. George's Hospital, she was operated upon, but would not remain in the Hospital, and she died of peritonitis at her own house. In another case, treated in the Hospital, a short time after puncture of the vagina, symptoms of acute peritonitis came on and she died. At the *post-mortem* examination we found in the abdomen a great quantity of menstrual fluid; it was impossible to explain the presence of the liquid blood in the abdomen, other than by supposing that it had passed from the uterus through the tubes into the peritoneal cavity.

The following case, recorded by M. Locatelli,† is more complete and conclusive, and more interesting too, by reason of the similarity of the anatomical changes described in this case with those which existed in Case I.

CASE VI.—*Congenital imperforation of the vagina; at* 20, *symptoms recurring each month; abdominal enlargement; hysteria; at* 26, *incision of the membrane obstructing the vagina; evacuation of from six to eight ounces of black coagulated blood and mucus; peritonitis a few hours after the operation; death on the second day.—Dilatation of the uterus and tubes, especially the left, which was ruptured, and from which putrid blood escaped, similar to that which was found in the corresponding iliac fossa.*

A girl, aged 26, began, when 20, to suffer symptoms of retained menstruation, which have recurred every month since for four or five days. On examination there was found to be complete occlusion of the vagina at about its middle. An abdominal tumour the size of a fœtal head was felt over the uterus, it was tender on pressure; fluctuation was felt at the vaginal obstruction; the membrane was incised and about eight ounces of black coagulated blood mixed

* Sir B. Brodie, *Lond. Med. Gaz.*, v. xxvii. p. 810.

† Locatelli, septembre, 1848, *Gazzetta medica di Milano, cité dans l'Encyclographie belge*, 9e serie, t. i. p. 268. (Bruxelles, 1848.)

with mucus was evacuated; pressure on the tumour favoured this evacuation. Peritonitis set in and death on the second day.

On making a *post-mortem* examination there was found peritonitis with sero-purulent effusion mixed with a little putrid blood in the left iliac fossa; the uterus was about the size of a fist; the Fallopian tubes were adherent by membrane to the posterior part of the ovaries and were distended with black blood. The left tube was the size of a turkey's-egg, and had ruptured; the right about the size of a nut, the ovaries showed several cicatrices, and ovules in various stages; several ovules the size of a millet-seed were found in the left Fallopian tube.

In the following case by Munck we find the same anatomical lesions occurring in the course of the disease, without any operation having been performed.

Case VII.*—*Obliteration of the vagina from a cartilaginous cicatrix; symptoms commencing at* 17; *hypogastric tumour formed one month before death; rupture of the tumour and fatal peritonitis on the fourth day; uterus enlarged and filled with blood; Fallopian tubes enormously distended; rupture of the fimbriated extremity of the right tube; effusion of menstrual fluid into the peritoneum; cartilaginous obliteration of the vagina.*

R. S., aged 18, was *in articulo mortis* when seen first by Dr. Munck, February 24th, 1847. For eighteen months she had suffered symptoms indicating the accession of menstruation, but without any results: these symptoms recurred periodically with increasing severity. After nine months a tumour appeared in the abdomen, it was very tender on pressure. On February 20th, she felt something give way, and the abdominal tumour disappeared. Severe pain followed, attended by a good deal of febrile disturbance; a blister was applied and a saline aperient administered; but she died in three days.

Post-mortem examination.—On opening the abdomen, twelve or fourteen ounces of thick reddish fluid was seen; the peritoneum was highly congested, and traces of lymph were evident. The uterus was large but soft, and contained four or five ounces of fluid like that in the abdomen. The Fallopian tubes were enormously distended, the

* Munck. *London Medical Gazette*, vol. xxvii. p. 867.

free extremity of the right being closed, and a rupture of about three lines in extent was seen, forming a free communication between the uterus and the cavity of the peritoneum through which the fluid had escaped. The vagina was closed by a firm cartilaginous membrane.

The following case of double uterus and vagina, published by M. Décès,* illustrates a very rare example of imperforation of the left half of the uterus and of the corresponding vaginal pouch, which gave rise to all the accidents of menstrual retention; the *post-mortem* examination showing these lesions on one side only.

CASE VIII.—*Symptoms beginning at* 15, *when menstruation began with great difficulty; lumbar and hypogastric pains each succeeding month; tumour in the left iliac fossa, which increased steadily for eight months prior to admission; retro-lateral uterine tumour; exploratory puncture; fatal peritonitis.—Effusion of altered blood into the abdomen, from the rupture of a multilocular cyst, formed by the enormously dilated left fimbria; altered blood in this tube, in the left uterus and corresponding vaginal infundibulum, which was separated from the right vagina by a membrane which showed the puncture made during life; right uterus and tube healthy, both ovaries healthy.*

X. aged 16, was admitted into the Hospital la Riboisière, May 16th, 1854. She had been regular for a year, but had always suffered great pain in the lumbar and hypogastric regions. Menstruation was scanty, lasting only for about two days. Eight months ago a tumour formed in the left iliac region which continued slowly to increase, especially during the periods. When admitted, she looked in perfect health. A triangular tumour, the size of the fist, was discovered near the left iliac fossa, hard and nodulated, and slightly tender; fluctuation in it could be felt plainly *per rectum*. On the 14th, three leeches were applied to each thigh, and on the 21st menstruation came on for two days. On the 26th, the tumour was punctured *per vaginam*, but though nothing flowed, the canula was filled with a thick chocolate-coloured substance, like decomposed blood. The same kind of fœtid fluid came away during the day.

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* Décès. *Bulletins de la Société anatomique de Paris*, juillet et août, 1854, p. 222.

In the evening she had a rigor. Pulse 120, feverish. Twenty leeches were applied and an opium plaister. From this time she gradually became worse, and sank on the 30th.

Post-mortem examination.—On opening the abdomen, about an ounce and a-half of fluid, resembling that which escaped *per vaginam* during life, was found in a pouch in the left side of the pelvis. There were slight traces of peritonitis. The vagina appeared normal; the opening made during life was seen at its upper and left part. The Fallopian tube and ovary were seen on the right of the uterus, but on the left no trace of either could be found. The peritoneum was reflected over the bladder, and on the left side over a second uterus. This second uterus, situated to the left of the former, was larger, but of normal shape; its right side was covered with peritoneum, having on that side corresponding to the left of the first no tube or ovary. At the junction of the upper with the left border a round opening, resembling that of a Fallopian tube, was seen, and on inflating it the air passed into the cyst or pouch before-mentioned, along a tube resembling that of the opposite side; its extremity formed the wall of the cyst which was, as it were, formed by the fimbriated extremity of the Fallopian tube united to the surrounding organs. Below, and within the cyst, a body resembling an ovary was found. This uterus opened into a very dilated vagina terminating in a *cul-de-sac* a little above the punctured part. Nowhere did the two uteri or vaginæ communicate, the cavities were distinct and independent. Thus, whilst the menstrual fluid escaped normally from the right uterus and vagina, it accumulated in those on the left.

Instead of making any remarks on this case, I would refer the reader to the report made on the specimen when exhibited at the Anatomical Society.* I will only add that this case, which is classed with many others, differing widely among themselves, as a case of hæmatocele, which, after all, is only a symptom that occurs under very different morbid conditions, cannot be interpreted like the cases already described as the result of a deviation of a fecundated or non-fecundated ovule.† I make this one remark, because I shall consider in a succeeding chapter the different varieties of hæmatocele, and

* Goupil, *Bulletins de la Société anatomique*, 1854, p. 227.
† Gallard. *Bulletins de la Société anatomique*, 1858, p. 292.

demonstrate what I have just stated, viz., that the affection called peri-retro-circum-uterine hæmatocele, feminine hæmatocele, in fact, is always symptomatic of some other affection, and not a disease *per se*.

Having said thus much, I come now to the fourth variety of my first class, viz., imperforation of the cervix uteri. This condition is sometimes associated with other malformations, as in the cases reported above by Delpech,* by Debrou,† and in that of Wuillaume:‡ sometimes, on the contrary, it is the only obstacle to excretion; sometimes the malformation consists only of a diaphragm formed of mucous membrane (as in Delpech's cases), sometimes of fibrous coarctation (as in Debrou's and Wuillaume's cases), and sometimes it is caused by the absence of a part of the cervix, as in the two following cases:—

CASE IX.§—*Complete congenital imperforation of the vagina with total absence of the cervix uteri; menstrual retention from seventeen years of age; cured by an opening made into the body of the uterus, and maintained for two months.*

A woman aged 32, married ten years, had never menstruated. She began at 15 to have symptoms of menstruation, but no discharge appeared. On examination, the uterus was found to be imperforate, and there was complete absence of the cervix. There was some abdominal enlargement with tenderness, especially on the left side, where fluctuation was felt. A trocar was introduced *per vaginam*; in six hours after four ounces of blood escaped, the tumour diminishing meanwhile. In two months she completely recovered, no cervix could, however, be seen. Menstruation subsequently occurred normally.

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* *Vide* page 13 in note. † *Vide* page 17 in note.

‡ Wuillaume, *Gazette medicale*, 1835, p. 820:—

In March, 1823, I was requested to see a young woman suffering from menstrual retention; on examination, I found complete absence of the vagina, the place being occupied by a thick, firm, fibrous tissue, above which the uterus was felt distended. Partly by the finger, partly by the knife, I made a way up to the uterus which I punctured with a pharyngotome. A quantity of thick inodorous blood like wine-lees escaped; twenty leeches were afterwards applied externally and lavements. She made a very good recovery, and two and a-half years after continued well.

§ Hervez de Chégoin. *Archiv. génér. de médecine*, 1re serie, t. xxi, p. 610.

Case X.—*Symptoms commencing at* 16; *hypogastric tumour, which month after month increased for eight or ten days, and was the seat of acute pain; absence of a part of the imperforate cervix; puncture of the uterus at* 22, *and escape of a pint and-half of altered blood, which reduced the tumour to one-half; continued escape of altered blood for fourteen days, followed by a diminution of the tumour to one-fourth its original size; after two ordinary menstruations, the uterus remained the size of the third month of gestation.*

M. G., aged 22, had symptoms of menstruation at 16. Twice in one year she had attacks of peritonitis. On examination there was some abdominal enlargement, and she suffered from hysterical convulsions. A tumour was felt in the hypogastrium, it was round, moveable, and tender, and reached as high as the umbilicus. The enlargement and pain increased every month, fluctuation was very distinct. She had never menstruated. Though the tumour was clearly uterine, no trace of os or cervix could be felt. A trocar was introduced *per vaginam* into the tumour, and a pint and-half of brown fluid escaped, which at once reduced the size of the tumour. The discharge continued four days, by which time the tumour was reduced to one-fourth, the tenderness also had disappeared. Twenty days after, menstruation appeared and lasted for six days. It returned again in a month perfectly natural.

The remarkable point about these cases, is the length of time during which these women suffered from menstrual retention, and the slight effects produced in comparison with those where the defect occurs after the establishment of the function. This difference, which seems to be connected with a diminished contractility of the congenitally imperforate uterus, certainly exists, whether it may be thus explained or not: it cannot be attributed either to the situation or the nature of the obliteration, for we find that it occurs in cases of menstrual retention which differ only in respect to the period at which the fibrous coarctation occurs; thus it may be congenital in one case, or the result of parturition or an operation in another. It is remarkable too, that operations so apparently simple as incision of the hymen, or puncture of the thin diaphragm which occludes the cervix should be so severe; and that in the great majority of cases, no matter what the nature of the deformity, the accidents which cause death are the same, and are just those which the operation was

intended to prevent, namely, effusion into the peritoneum of the blood contained in the distended tubes. This unfortunately too frequent result of the operation, though at first inexplicable, is easily understood when we reflect that the operation necessarily excites uterine contraction, which, instead of ceasing after the expulsion of the greater part of the fluid, continues, and at length forces the blood contained in the tubes against the pseudo-membranous walls of the cyst, which is interposed between the tube and the ovary. This too frequently ruptures, and then the effusion takes place. It becomes, therefore, a very grave question when the operation should be performed, and how we may guard against the peritoneal effusion which, in the great majority of cases, occurs almost immediately. We shall, however, return to this subject in considering the question of treatment.

Section II.—Menstrual retention from cicatrices occurring after puberty.

The cases comprised in this second class are much less numerous than the first, with which they have been confounded; but they differ from them in that the obliteration has always been preceded by ordinary menstruation. Moreover, the accidents which occur after the establishment of the flow are much more serious than in congenital imperforation. The cicatrices which occur after puberty occupy different parts of the vulvo-uterine canal, and they might, consequently, like the first class, be arranged under several heads; but this separation of the cases has no practical value, and I need therefore only point out the differences presented to the touch when the cicatrix occupies, either 1. the vagina, or 2. the vagina and part of the cervix, or 3. the uterine orifice alone. In the two latter cases, the finger easily detects the increased volume of the cervix at the roof of the vagina, but while in the last it is free all round and is easily recognised by the speculum, in the other, on the contrary, the cervix is fixed by the cicatrix, which unites it to the vaginal wall, as in the case recorded below by M. Frank.*

* Obs. de J. P. Frank, t. ii. p. 259. Edit. franç. de Double, 1842. A girl, aged 20, was admitted into the Vienna Hospital in 1799, suffering from abdominal enlargement, and pain of an aggravating character. It was at once discovered that the orifice of the uterus was adherent to the left side of the vagina. This was separated with the knife, and soon eight pounds of blood escaped. For two months all went well, then the adhesion came on again, the retention reappeared, and she was operated upon a second time, but with what result is not known.

Under these circumstances there is not usually much difficulty in diagnosis; at least, if I may judge from a case of cicatrization of the left side of the cervix which I saw in 1848 with M. Piédagnel. That resulted from cauterization with the acid nitrate of mercury, which gave rise to severe dysmenorrhœa, though it did not actually prevent the excretion. The same thing happens when the cicatrix is vaginal, as in the case reported farther on by M. Gueneau de Mussy. The real difficulty in a case of this kind, is where the finger discovers a tumour of singular aspect, the characters of which simulate those of retro-uterine hæmatocele; but in the former we miss the cervix at the roof of the vagina, and in place of it we discover a small indurated nodule hidden in a number of folds. Here the speculum, which, in the majority of uterine affections, is only of secondary importance, becomes absolutely necessary, to demonstrate the relations of the cicatrix to the surrounding parts. Cicatrices may, it is said, follow ulcerations of various kinds. I willingly admit it; but, at the same time, there are not in practice so many varieties as are pointed out in theory. The history of the following cases shows how cicatrices may result from cauterization, and they suggest, therefore, the great need of care in the use of a remedy which may lead to such serious mischief.

Case XI.*—*Occlusion of the vaginal orifice of the cervix from cauterization; symptoms of menstrual retention; cured by vaginal hysterotomy.*

A young lady had granular ulceration of the cervix, which was cauterized with the acid nitrate of mercury and Vienna paste. At the following menstrual period she was seized with violent pains in the hypogastrium.

On examination with the speculum, the os was seen to be closed, and the uterus distended. A bistoury was introduced, and an ounce of blood evacuated. She recovered, and afterwards menstruated normally.

I need not stay to inquire whether these cauterizations were necessary or not, but will content myself with remarking upon the sad result which followed. In the following case death was the remote consequence of amputation of the cervix. The cicatrix—leading, first of all, only to a disturbance of the catamenial excretion, but ultimately

* *London Medical Gazette*, and Ranking's *Half-yearly Abstract*, 1850.

making it impossible—and thus brought on effusion of menstrual blood into the peritoneal cavity.

CASE XII.*—*Amputation of the cervix uteri; rapid cicatrization; dysmenorrhœa three years afterwards; retention of menses the following year; peritonitis; phthisis; death.—Autopsy; complete cicatricial obliteration of the uterus; tumour in the right iliac fossa containing altered blood.*

L. T., aged 30, had suffered much since she began to menstruate. She married at 15½, and fell pregnant immediately; the labour being quite natural. She suffered a good deal from menorrhagia, and dysmenorrhœa afterwards. Subsequently a tumour, the size of a pigeon's-egg, was developed on the cervix; for this the entire cervix was removed, rapid cicatrization followed. Three years after, menstruation became very painful, and in the fourth year acute peritonitis came on, which yielded to baths and bleeding. Menstruation then stopped, and, three months after, peritonitis recurred and a swelling formed in the right iliac fossa. Four months after, these symptoms were greatly aggravated and she died.

On *post-mortem* examination, the os uteri was found to be entirely obliterated. The right iliac fossa was occupied by a tumour containing softened tubercular matter, and tubercles were found in other parts of the body. The vagina terminated superiorly in a thick, firm *cul-de-sac*, formed of fibrous tissue such as is peculiar to cicatrices.

Along with this case—the account of the *post-mortem* appearances of which is very defective, though it enables us to recognise that the probable cause of death was chronic peritonitis, produced by the effusion into the peritoneal cavity of the menstrual secretion, the escape of which was impossible—I will now relate a case reported by Dance.†

CASE XIII.—*Obliteration of the cervix following difficult premature labour; four months after, symptoms of menstrual retention; enlargement of the body and neck of the uterus; successful operation.*

R., was 23 years old when she became pregnant for the first time, and miscarried at the sixth month; the head of the fœtus remaining

* Pauly. *Maladies de l'utérus; d'après lés leçons de Lisfranc*, p. 230. Paris, 1836.

† Dance. *Maladies de l'utérus* (*Arch. gén. de méd.*, 1re série, t. xx. p. 530, Obs. V).

for three days in the cervix uteri. When seen by Dr. Barré, the uterus was completely inert, and on the sixth day after the commencement of her labour, 11th August, 1828, she was delivered. Four months after, she was taken with severe pains, as if menstruation was coming on. Month after month the same phenomena were repeated with increasing severity. On examination, April 1829, a tumour was discovered at the roof of the vagina, conical in shape, and the size of an egg; but no opening could anywhere be discovered. Externally, a tumour was felt in the hypogastrium, which was continuous with that in the vagina, and proved to be the distended uterus. The most careful examination failed to discover any os uteri, but in its place a cicatrix was visible. At each menstrual period the tumour could be felt both internally and externally, to increase in size, but during the interval it slightly diminished. This continued for about eight months. It was then determined to operate during a menstrual period. Just before the operation the tumour, which was soft and fluctuating, was felt *per vaginam* distinctly contracting, as in parturition. This seemed to augur well. The uterus was punctured in the site of the cicatrix, and five or six ounces of bloody fluid escaped, the tumour greatly diminishing. A sound was fixed in the opening, and emollient injections were afterwards used. The sound was retained for fifteen days with few exceptions, when pain supervened. In a short time the uterus resumed its proper size and direction, but the os remained small and circular. At the end of a month menstruation came on naturally, without pain, and lasted for six days. She ultimately made an excellent recovery.

In these three cases the cicatrix resulted from a traumatic injury, for so we may legitimately regard laceration of the cervix occurring during parturition. In the two following cases the same condition resulted from gangrene of the vagina, which occurred in the one case as a sequel to typhoid fever; in the other, spontaneously. I shall begin with the former because I saw that patient during life, and after death I examined the parts, they are faithfully described in the details of the case given me by M. Sécond Ferréol.

Case XIV.—*Gangrene of the vagina occurring in the course of typhoid fever; symptoms of menstrual retention four months after; hypogastric tumour from cicatricial impermeability of the vagina;*

puncture of the tumour and escape of from sixteen to eighteen ounces of blood; followed by rigors and symptoms of peritonitis; death five days after the operation; peritonitis and double pleurisy; no pus in the uterus or appendages.

P. S., aged 35, was admitted into la Pitié 14th March, 1858, under the care of M. Noël Guencau de Mussy. Menstruation began at the age of 12, but was scarcely visible for a year after; it then became regular and abundant. At 16 she married, and at 17 she was delivered of a child naturally; puerperal fever followed, and she was ill for two months. At 19 she miscarried at the fifth month. At 22 she had a child at full term. A year and a-half after, she had an attack of fever which greatly reduced her, after which, menstruation became very scanty, but without pain. Four months after she had typhoid fever in la Pitié, with bad bed-sores over the sacrum. In two months she went out. Her last menstruation was on the 8th of November, and continued for two days only. At the beginning of December, just as she came into the Hospital, she noticed on her chemise a spot of pale-coloured blood not larger than the palm of the hand. This was all that appeared that time. Three months afterwards, during menstruation, she was suddenly seized with violent pain in the back and loins, intermitting with increasing severity for four hours. She had no rigor nor any vomiting. The pains continuing for several days she was admitted into the Hospital.

On examination the vagina was found to be short and conical. No os uteri could be discovered. Externally, in the hypogastrium, a round tumour could be felt, the size of the uterus at the fifth month, it was soft and fluctuating. She had little or no pain during the examination. There was no fever. She stated that in the intervals between the pains she feels as if a ball were inside her, rolling about from side to side with her movements. Opium plaisters were ordered; baths, and emollient injections. Examining with the speculum, the fourchette was found to be destroyed, and the perineum gone; cicatricial bands were observed about the orifice, which the patient said resulted from gangrenous scars, contracted during an attack of typhoid fever. The roof of the vagina showed no trace of cervix uteri, but only a transverse cicatrix. Examining *per rectum* no cervix could be felt, but an enormous fluctuating tumour situate in front of the rectum. M. Michon, under whose care the patient came, determined to operate. Accordingly on April 13th, 1858, a trocar was introduced, and four or five spoonfuls of

thick, black, fœtid blood escaped. The canula was then withdrawn, and the opening enlarged by a blunt-pointed bistoury; through this sixteen to eighteen ounces of the same kind of fluid escaped, and the tumour diminished greatly. The operation gave but very little pain, and when the discharge had ceased the tumour did not reach more than the width of three fingers above the pubis. In the evening, while sitting up to pass urine, a mass passed from her suddenly with a gush, after which she expressed herself as feeling greatly relieved. She passed a good night, but on the following day shivering came on, which lasted two hours and was followed by smart fever.

On the 15th she still complained of great pain, vomiting and fever; pulse 160. Twenty leeches, a bath, mercurial inunction, poultices, calomel, and emollient injections were ordered. In the evening she was worse in every respect.

On the 16th, bilious vomiting came on; pulse 148; respiration 60; pain in the abdomen, which was slightly distended. In the evening she had prolonged and alarming syncope, weakness increasing; no blood passing *per vaginam*; no vomiting, shivering, or cough.

On the 17th, extreme dyspnœa came on, the abdomen became more tender and tympanitic; pulse 148; respiration 86. She died next day.

Post-mortem examination.—On opening the abdomen there was abundant evidence of general purulent peritonitis with effusion of lymph; the abdominal cavity contained about sixteen to eighteen ounces of green serous pus. Inspection of the thorax showed pleurisy with effusion of the left side, and congestion of both lungs. At the fundus of the vagina, which was very short, there was a sort of vertical membranous diaphragm, pierced by a round hole about the size of a large gum-elastic bougie. It was thin, soft, and even friable in some places, so that a blunt stilet pierced it without any difficulty. Beyond this there was a large cavity formed in front by the diaphragm itself, and on the two sides by the enormously dilated walls of the cervical uterine cavity. The cervical labiæ, much thinned, were continuous with the vaginal walls. Behind, this large cavity communicated through the dilated uterine orifice with the cavity of the uterus which was much less dilated than the cervix.

The two cavities of the body and cervix might be compared to an hour-glass, the two parts of which were of unequal size, and in this case the cervical cavity was the larger of the two. The uterine walls were

much hypertrophied, and the sinuses visibly enlarged; but no trace of pus was seen anywhere about the structure of the uterus. The extremity of the Fallopian tubes were obliterated and united to the ovaries; the two tubes themselves were dilated so as to form two cysts, of which one was as large as a nut. Both contained limpid serum; no pus was found in the tubes. The ovaries were cribbed with cicatrices, and contained a great many Graäfian vesicles.

I will only make one remark in reference to this very interesting case, viz., that death, instead of resulting, as it did in all the preceding cases, from the effusion into the abdomen of retained blood, was really due to the operation and the extension of inflammation to the neighbouring parts; so that this case offers a sad example of the fatal results which may follow so apparently trivial an operation. Unfortunately, no amount of surgical skill can prevent the occurrence of such disasters, which, however, do not seem to occur when they are most to be feared: witness the case referred to below* by my friend M. Goupil. I ought to add that he witnessed her suffering with no little anxiety, inasmuch as she was related to him, though he never examined her.

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* A woman, aged 48, had had six natural labours and one instrumental. In 1852, she consulted M. Velpeau, and was said to have fibrous tumours. In 1855 she had fungus of the uterine cavity, and was treated by cauterization and injections of perchloride of iron. In January, 1857, the hæmorrhage increased, and she had symptoms of peritonitis of the left parovarium, which was treated by leeching. In April she was taken suddenly, and without apparent cause, with gangrene of the vagina and os tincæ; during the cicatrization bands formed, and the vagina contracted. She then left, but promised to submit to a continuance of the treatment of dilatation by her own medical attendant; it is uncertain whether this was fulfilled. For several months after she suffered great pain during menstruation, but no discharge appeared. She was then seen by M. Dubois, and a large hard tumour, occupying the pelvis, between the uterus and rectum, was discovered; the vagina was much contracted. In July some expulsive pains came on, and M. Nélaton was consulted. Hæmatocele, or rather retention of menstrual blood in the uterus and in the *cul-de-sac* behind the obliterated vagina, was diagnosed, and a trocar introduced through the vagina. A little blood came, followed by slight temporary relief. The pain returned with increased severity, and the patient, distracted by the divers opinions given of her case, and urged by her extreme suffering, introduced her finger into the opening made, and so effectually enlarged it and broke down the cicatrices that a considerable quantity of the accumulated blood escaped. From that moment she improved, and finally recovered; the vagina being kept open by plugging.

It should, however, be remembered that her social position, and the vigilant watching she received, counterbalanced the unfavourable conditions attaching to the existence of the fibrous tumours, from which she had suffered for a long time, and which remained unaltered notwithstanding the other pathological changes going on within or about the uterus. I do not think we can attribute to these fibrous tumours the gangrene which occasioned the vaginal cicatrices; but, even if we could, it would only be secondarily that obliteration of the vagina could be thus produced.

This re-opens the question I have previously asked, whether we may attribute to obliterations of the cervix other results than those mentioned in some of the cases which I have collected? J. P. Frank,* and Boyer,† who are justly regarded as the representatives of the utero-pathologists who immediately preceded us, remark, that cicatrices of the vulvo-uterine canal may result from burns, syphilitic ulceration, variola, skin affections, and even cancer.

Of syphilis I need say nothing, because at present I have formed no opinion on the subject; I have, at different times, met with pustules in the vagina of women—who had not contracted syphilis, nor even had sexual intercourse—and in no case did either bands or cicatrices result. As regards venereal ulcerations, I have seen a sufficient number to enable me to speak with authority on this subject; but a distinction which MM. Frank and Boyer have not noticed ought to be made between blenorrhagia and syphilitic ulcerations. No woman suffering from blenorrhagia, whom I have seen, has ever had as a result either bands or cicatrices, whether of the vagina or cervix. Some, nevertheless, after the blenorrhagia, have suffered dysmenorrhœic pains which they had not before; but, in these cases, the blenorrhagia has given rise to pelvic peritonitis, and, afterwards, to uterine deviations; or it has left as a consequence uterine catarrh, to which I considered the difficulty of excretion might be attributed. Thus blenorrhagia may originate dysmenorrhœa, without giving rise to complete obliteration of the excretory passage.

As regards true syphilitic cases, none of the twenty or more whom I have seen affected with chancre of the cervix, and which, I should

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* *Loc. cit.*, t. ii. p. 258, et suiv.

† *Loc. cit.*, t. x. p. 426, 4th edit., 1831.

add, were not cauterized, have presented either obliteration or contraction of the uterine orifice. Two only, who had chancres of both the vagina and cervix, had hard honeycombed cicatrices in the vagina; but in both of these, whom I saw the following year—during which time they had had frequent sexual intercourse—the cicatrices were not more appreciable to the touch; and, in one in particular, the left vaginal *cul-de-sac*, which had been almost obliterated by the cicatrix, was re-formed. I believe, then, I am authorised in saying, that obliterations, consequent upon venereal affections, blenorrhagic or syphilitic, are quite exceptional—at least, if we abstain from cauterizations, as I did. Probably we have attributed cicatrices to syphilis which were the consequence of another kind of ulceration, especially dartrous ulcerations—to use a term employed by M.M. Frank and Boyer.

My reason for this latter opinion is, that I have seen two cases—which concurrently with syphilis, secondary in one case and tertiary in the other, were affected with a scrofulous form of chronic eczema of the vagina—with obliteration of the right vaginal *cul-de-sac* in the first, and of the entire vaginal roof in the second. In the latter, a sinus, admitting the uterine sound, remained, and always allowed the easy discharge of the menstrual fluid during the five years that the cicatrix existed. These two cases, though they tend to weaken the opinion of Frank and Boyer as regards venereal diseases, establish, on the contrary, that obliteration may result from dartrous ulceration, and especially from chronic eczema.

The same thing may result from organic growths, as in the case mentioned by Latour.* Cancer, however, instead of producing an

* Obs. de Latour (d'Orleans), extraite de Duparque, *Maladies de la matrice*, t. ii., p. 13. A woman ceased to menstruate at 40 years of age. At 50 she noticed a tumour which had formed in the abdomen, it gradually increased to an enormous size. In one of her paroxysms of pain which she described as unbearable, she experienced a peculiar sensation in the abdomen; the pains then ceased, the hypogastric tumour diminished, and the patient died the next day.

On opening the abdomen, the peritoneal cavity was found to be filled with an enormous quantity of black blood. The uterus was dilated; its walls thickened everywhere, except at the fundus, which was thinner than usual and ruptured. The cervix was cartilaginous and completely obliterated. It was now evident from the symptoms observed during life and what was found after death, that the blood which was discovered in the peritoneum, came from the uterine cavity, whence it passed through the rupture in the fundus.

obliteration of the cervix, more often renders it impermeable without absolutely destroying the orifice, so that I have placed examples of menstrual retention, caused by the different varieties of cancer, in one of the succeeding sections.

Section III.—Menstrual retention from congenital contractions of cicatrices of the vagina or cervix uteri.

I have hitherto treated of cases wherein absolute impermeability of the os uteri completely and permanently prevents the performance of menstruation; but there are others in which the function, though painfully performed, is not altogether prevented. The nature of the obstruction in these latter cases varies considerably. In some there exists such an extreme degree of coustriction that it very closely resembles obliteration. These constitute my third class; and they are distinguished from true cases of congenital obliteration by the fact that either the secretion has previously taken place and been arrested, albeit with extreme pain, or, retention is itself followed by the performance of the function, as in the following cases:—

Case XV.*—*Congenital atresia of the vagina: symptoms of menstrual retention at* 13; *aggravation of those symptoms at* 22; *discharge of altered blood for ten or twelve days*; *sudden stoppage of the same, followed by symptoms of inflammation; death four days after. Post-mortem examination.—Dilatation of the uterus and Fallopian tubes; perforation and communication between the tubes and that part of the vagina situate behind the fibrous constriction, in front of which a kind of cloaca existed containing the urethra.*

A girl, aged 22, was admitted into *la Charité* in June, 1814; she had never menstruated, but had suffered great abdominal pain with enlargement. On examination, there was found to be complete absence of the vagina. Abdominal pains began at 13; tumefaction at 17, which was most marked on the left side. On November 29th a quantity of thick, reddish-brown, inodorous fluid escaped through the meatus; examination failed to discover whence it came; the abdomen diminished in size. On December 7th inflammatory symptoms set in followed by diarrhœa; she continued

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* Boyer. *Traité des maladies chirurgicales*, 4e edit., t. x. p. 44.

to get worse up to January 18th, when she died, forty days after the first examination.

Post-mortem examination.—The only vulvar orifice which was discoverable led to a canal an inch and a-half long. In its interior were two others, placed one above the other; the upper was the meatus urinarius, the lower represented the vagina and abutted on the cervix uteri. The cavity of this organ was larger than usual; at its sides and upper part were two tumours, the right, a little smaller than the fist, contained a fluid like that which escaped from the vagina during life; joined to this was another, which reached up to the stomach and contained a number of cavities filled with blood, with cysts of an hydatiform character. The tumour on the left side contained from eight to ten ounces of thick blood; the ovaries were absent, or, at least, not distinguishable, and we thought that these tumours were developed in their substance. The cavity of the tumours did not communicate with that of the uterus; but there sprang from each of them a canal, which extended as far as the small cavity placed near the vulva, without actually communicating with it.

I ought, perhaps, to have placed this case among the congenital obliterations, and to have insisted on the remarkable character of the first part of the vulvo-uterine canal, which resembled, in some degree, the cloaca of certain animals; a condition which I once saw during my residence at the *Hôpital Beaujon* in a still-born infant. In that case, the rectum, uterus, and bladder all ended in the cloaca. But I place this case in the position to which it belongs anatomically, and, though there may be some doubt as to the origin of the menstrual fluid, which, instead of coming from the uterus, seemed rather the result of perforation into the vagina of the blood-tumours of the tubes; it is a sort of transitional case between the preceding and the following. I must here make one remark in reference to the existence of the sanguineous tumours which were attached to the uterus, and the difference of the fluids contained in the cavities of one of them, because in this we see the successive changes which may occur in the effused blood of an hæmatocele. I am surprised that the pupils of M. Nêlaton, who wished to credit Hippocrates with a knowledge of this affection, have not referred to this very interesting case of Boyer. This strange forgetfulness compels me to refer to a case, which I shall only mention in order to show that examples of hæmatocele exist in all varieties of cervical obliterations. Moreover, it proves this fact,

viz. :—that the reflux of menstrual blood from the uterus, through the tubes, into the peritoneal cavity, rests now upon evidence so strong that there is no longer any need of further illustration.

CASE XVI.—*Painful menstruation; sterility; death by a gun-shot. Post-mortem examination.—Incomplete obliteration of the cervix by vaginal mucous membrane.*

A woman, aged 50, who during nineteen years of married life had never been pregnant, was killed by a gun-shot. Menstruation had always been scanty with her, and attended by a good deal of pain and distension about the lower part of the body.

On examining the body after death, the cause of the sterility was soon apparent. The internal os uteri was firmly closed by a membrane which lined the vagina, and the external os was also very small. The cervix was twice as long as usual, apparently because of the long-continued expulsive efforts of the body of the uterus to get rid of the menstrual product. The cavities of the Fallopian tubes, especially near the uterine orifice, were much larger than usual.

CASE XVII.*—*Painful and scanty menstruation; sterility; division of the cervix; cure; pregnancy.*

J. G., aged 30, had been married two years, but had not been pregnant. She consulted me 26th October, 1845, for dysmenorrhœa and sterility. Menstruation had always been regular, but scanty and painful, and had been worse since her marriage. Sexual intercourse was always painful before the period. The discharge relieved the pain. The uterus was found to be normally placed and moveable; the os exceedingly small.

I determined on incising it after the manner of Simpson, with the metrotome cachée. Next day a sound could easily be passed into the uterus, and it measured just two and a-half inches. On the 10th November, 1845, she menstruated in a way she had never done before, viz., for five days, and without any pain. On the 2nd February, 1866, she complained of a feeling of discomfort, and by the end of April menstruation temporarily ceased. She was then some months advanced in pregnancy.

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* Oldham, *loc. cit.*, Case I. p. 920.

CASE XVIII.*—*Scanty menstruation ; extreme dysmenorrhœa ; division of the cervix ; partial relief.*

M. R., aged 31, single, consulted me for difficult and scanty menstruation; it was quite regular in time, but only lasted one day, and sometimes the pain was so severe that she was obliged to go to bed. In vain I tried, by attention to the general health during the intervals, and by the application of local anodynes, to cure this defect. I found the vagina smooth and relaxed; the uterus low down in the pelvis, quite moveable; the cervix small, and the os remarkably contracted. I divided the cervix, and passed metallic bougies afterwards, when I discovered that the uterus only measured one-and-three-quarter inches. The result was, that the pain was greatly relieved, but the discharge only lasted one day. Two months afterwards I divided it again, and the result was no better.

It is to be regretted that Dr. Oldham contented himself in this case with the remark, that the uterine orifice was remarkably contracted, without showing, at least by comparison, what was the amount of contraction; and it is still more to be regretted that he did not note, in either of his cases, what was the condition of the cavity of the cervix, and especially that of the cervico-uterine orifice, a matter which appears to me to be of the utmost importance in this question. I make this remark because, in order to determine the smallest diameter of the cervico-vaginal orifice through which the free excretion of menstrual fluid is possible, I have measured that orifice a great many times, but the result hitherto has not been very definite or satisfactory.

In the beginning of 1855, a woman was admitted into *Lourcine*, who had suffered a good deal from dysmenorrhœa after an instrumental labour, for which she was nine months in the *Hôtel Dieu;* where she had the actual cautery applied. The cervico-vaginal orifice was so contracted that it would not admit the smallest sound, and when a stilet was passed, the orifice appeared to be inextensible. Menstruation came on while she was under my care—painful, it is true, for it brought on a recurrence of the peri-uterine pseudo phlegmon, which dated from the miscarriage. The excretion itself was easy. The same year two patients, both of them mothers, came under

* Oldham, *loc. cit.*, Case II.

my care. According to the statement of one of them, menstruation was perfectly regular; with the other, it was painful, the blood being expelled in clots after some pain; in both, the cervico-vaginal orifice was circular, soft, and of such small dimensions that a silver stilet entered with difficulty. During the time they were under my care, menstruation came on normally in both. In another case, which came under my notice in *la Pitié* in 1856, the particulars of which are given in the diagnosis of pelvi-peritonitis, the cervico-vaginal orifice scarcely admitted a No. 2 urethral sound; yet in this woman, who had once miscarried, menstruation was quite normal before she had the affection which brought her under my notice, and continued so after her cure, without any incision of the cervix.

From a consideration of all these cases I have come to the conclusion that, so long as this narrowness of the cervico-vaginal orifice is not carried to an extreme point, such as I have never met with, it does not of itself interfere with menstrual excretion. To disturb this function, it is necessary that some morbid phenomenon should be added to the atresia. I have insisted on these circumstances, because they account for the extreme reserve with which we have accepted in France the theory of mechanical dysmenorrhœa, described in England; and the still greater reserve exercised in regard to the operation recommended for its cure. The success of these operations certainly does not imply that they have not been done for spasmodic or congestive dysmenorrhœa, which would equally be improved by these proceedings.

Section IV.—Menstrual retention from enlargement of the uterus.

I pass on now to the consideration of my fourth class, because the condition which we have been discussing is pretty certain eventually to lead to hypertrophy in the length of the cervix, as in Case XV., and thus cases of the third kind are very apt to be mistaken for those belonging to this class.

But though the cases we have now to consider resemble one another as regards their symptoms and the mechanism of their production, yet they differ materially as to their one essential feature, viz., the nature and cause of the enlargement of the uterus. It may be due either to simple hypertrophy, inflammatory or organic, using those words in their most generic sense. I need not insist on

these differences, a correct appreciation of which is very important in reference to treatment.

The remark which I made at the beginning of this work, and which is indeed the ground-work of the volume, though, with regret be it said, it has been forgotten in many of the cases of imperforation I have detailed, is especially applicable here, namely, that dysmenorrhœa may, in the same way as amenorrhœa from obliteration, be followed by effusion of the menstrual secretion into the peritoneal cavity. Happily, such serious consequences as are exemplified in the case now to be detailed very rarely happen; but it is nevertheless true, that hæmatoceles are much more common as a result of defective menstruation than from any other cause. I insist upon this point, because the knowledge of the extreme dangers which may arise from errors in this secretion has a practical importance beyond those vain speculations which do not benefit the patient. It is, in fact, the fear of these dangers which has led me to study at great length the different varieties of dysmenorrhœa; especially that form of the disease which we are now considering.

CASE XIX.—*Dysmenorrhœa; three abortions; menstrual suppression at* 34, *with symptoms of peritonitis at the second period; at the fourth period, expulsion of old clots and hæmorrhage, followed by relief; at the fifth, increase of the discharge; at the sixth, more hæmorrhage and more relief; at the seventh, painful menstruation; at the eighth, improvement in every way; hypertrophy of the cervix.*

B., aged 34, was admitted into *la Pitié*, on February 5th, 1847. Though short of stature, there was no evidence that she had had either rachitis or scrofula in early life. She began to menstruate at 13, and was always regular, though menstruation was extremely painful. At 24 she married. She had three miscarriages, the last six years ago.

On October 20th, having been unwell for 24 hours, menstruation suddenly stopped without any apparent cause, and was followed by extreme pain in the abdomen, which in a few days subsided.

On the 20th November, menstruation did not come on, but the pain was more severe than at any previous period, resembling, she said, that of labour: in two days it extended over the whole abdomen. Vomiting, constipation, and smart fever succeeded, for which ninety-five leeches were applied in three applications. This gave only partial relief: she was still quite unable to sit up for the severity of the intermitting pains. Seven weeks after this she passed

some clots from the uterus after severe expulsive pain; this was followed by sharp hæmorrhage, which continued, though to a less extent, up to the time of admission.

When first seen the face was anxious, and painful, pains very severe, intermittent, and cramp-like, extending from the loins to the pelvis. The abdomen in the middle line was swollen, firm, and hard, but this did not extend to the iliac fossæ. The sound proved that the bladder was small. The cervix was depressed, and the labiæ hypertrophied. The fundus was felt in the anterior vaginal *cul-de-sac*. The uterus seemed quite double its normal weight and size. It was moveable. Micturition was frequent and painful; defæcation also painful; pulse small and frequent; no rigors.

Ordered rest in bed, baths and poultices to the abdomen.

In a few days she greatly improved in nearly every respect. The uterus diminished in size, but the anteflexion remained, and the discharge continued.

On February the 18th she was not so well, the hæmorrhage returned, the sense of weight in the pelvis increased, and the uterine contractions returned more severely. After the bleeding the swelling disappeared, the uterus could be felt in the right iliac fossa, it was more moveable than before; the cervix was much lower and more to the left. The broad ligament on the left side could be felt obscurely enlarged. The same treatment was continued.

On the 16th March, pains came on again severely. Hæmorrhage followed, for five days, and was succeeded by a slightly sanguineous discharge.

On the 30th, much improved. Intermittent uterine pains less severe. All discharge has ceased. The uterus is felt behind the pubis, the cervix in the hollow of the sacrum. It is smaller, the anteflexion has disappeared and anteversion only exists.

By the 9th of April, she had so far recovered as to wish to leave the Hospital; but she took too long a walk, and indulged in sexual intercourse which was very painful. Two days after there was increased sense of pelvic weight, more painful uterine action, and some bloody discharge.

April 11th.—So great was the pain that she could hardly stand upright. Her face was pale and anxious, no vomiting, no colic, defæcation and micturition extremely painful. Pressure in both iliac fossæ caused great pain; there was no anteflexion, but some anteversion; uterus almost fixed; cervix very low, large, hot, slight sanguineous discharge, examination extremely painful; pulse small, feeble, and frequent.

On the 17th she was much worse; the discharge was more abundant; uterine action energetic. This lasted for five days.

May 2nd.—She was seized with severe uterine colic, followed by syncope and some loss, which lasted nine days. After this the severity of the symptoms gradually passed off, and for the next few months she continued pretty well. The following year she had a slight return, which ultimately passed off.

Case XX.—*Profuse leucorrhœa; absence of menstruation from fatigue, followed by violent dysmenorrhœa, and escape of altered blood; enlargement of uterus and broad ligament, especially the right; hypertrophy and induration of the cervix; menstruation regular; cure three months after the commencement of the attack.*

E. C., aged 28, was admitted into *la Pitié*, November 24th, 1848; she had been ill for three weeks; her illness began by cessation of menstruation after some fatigue. She began to menstruate at 16, and continued regular up to 18, when she married. Menstruation was always scanty. At 19 she was confined, after a painful labour; from which she suffered through laceration of the perineum. Menstruation came on six weeks afterwards, notwithstanding lactation, and continued regular for fifteen months, when she again became pregnant, and was delivered at full term. She continued to suckle the child for three years. Menstruation being at times very profuse, and accompanied by excessive leucorrhœa.

Early in November she was seized with pains resembling those of abortion, but she had no reason to expect pregnancy. On the 10th some pale decomposed blood passed, the pains continued increasingly till the 29th; ceased on the 21st, reappeared on the 23rd, accompanied by discharge of blood; stopped again on the 24th, and returned more severely than before on the 26th. The loss increased up to the 29th, when both it and the pains diminished, and were felt mostly in the iliac fossa. On the 30th the following was noted, uterine pain diminished, size and tension of the abdomen less, just above the pelvis a tri-lobular tumour is felt, the larger portion of which is situate on the right Fallopian ligament, very firm and painful to the touch, movement of the uterus is communicated to the swelling on the right; the cervix is elongated, increased in size and indurated. Tenesmus after micturition, nausea, but not vomiting, constipation, tenesmus, ordered to be bled to sixteen ounces.

December 5th.—Has been improving since the 2nd, when after the application of ten leeches to the right iliac fossa, a good many clots

passed, but no evidence of pregnancy, there is now less pain, the abdomen is softer, except in the right iliac region; the vaginal *cul-de-sac* on that side is less deep than the other, but the tumour on that side cannot be reached; the uterus more moveable, the cervix softer and smaller; formication, which has existed in the thighs in front since her illness began, has ceased.

December 7th.—Improvement continues, no expulsive pain, but a sense of weight in the pelvis. The right iliac swelling much diminished under the influence of a sanguineous discharge which has been going on for some days. Micturition and defæcation without pain. No tenesmus.

11th.—Since the 9th, when the discharge ceased, she has been much worse, has had more colicky pain, tenesmus, and formication in the thighs, lancinating pains in the right iliac fossa, where the tumour has also increased; no fluctuation is felt externally, but indistinctly it is *per vaginam*, where it is also extremely tender. The uterus is pushed to the left side. There was a rigor last night. Ordered a mixture of rhatany, and opium.

16th.—The last two days she has been improving; the expulsive pains and sense of weight have ceased. The only pain is felt in the right iliac region, where there is some induration and fulness, which cannot however be felt *per vaginam*. Uterus much the same; ordered iodine inunction.

29th.—Is still improving; all discharge ceased; no pain; slight tenderness, only on pressure; uterus somewhat enlarged, and slightly to the left of pelvis. Micturition and defæcation painless.

On the 30th she left the Hospital. Towards the end of January menstruation came on with but slight pain. Swelling in right iliac fossa disappeared.

In 1855 I saw her again, she was in good health. Menstruation regular, painless. She had grown stout, but had not had any children since her attack of menstrual retention.

CASE XXI.—*Difficult menstruation; suppression from cold; symptoms of retention occurring four times, and followed by improvement; enlargement of the cervix; dilatation of the uterus; swelling of the right broad ligament; menstruation regular at next period; cured.*

H. L., aged 27, admitted 1st August, 1851, said she had been ill only a few days, began to menstruate at 18, with very severe

pain and little or no discharge. From 18 to 20 menstruation was regular, but always accompanied by severe pain which for a period of forty-eight hours was excessive, the discharge being very slight. At 20, during menstruation she washed some linen in cold water, this at once stopped the discharge and aggravated the pain, which became so severe that she was admitted into the Hospital; leeches were applied, and repeated; at the end of three weeks she was relieved by the loss of a large quantity of red watery fluid, after which she left the Hospital. For three months menstruation did not appear, though there was much pain. At the fourth month a discharge came on, and the pain was relieved. For eighteen months her periods were regular but painful, and of the character before described. At that time she had a second suppression without apparent cause; the pain was extreme, but was again relieved by free discharge. In the spring of 1851 the discharge again ceased, when she suffered so acutely that she was admitted into *la Pitié;* leeches were applied to the upper and inner part of the thighs. At the end of fifteen days, after extreme suffering, an abundant discharge came on with relief to the pain; ever since then menstruation has been irregular, both in time and quantity, and in the amount of pain. This irregularity has increased of late. In April there was no discharge, but great pain and enlargement of the abdomen, which led her to suspect pregnancy. In May the discharge appeared for one day; in July it was abundant, all pain disappeared, together with the abdominal enlargement, and she seemed quite well.

On the 24th July, menstruation began as usual with pain, but no discharge appeared; the pain increased each day, the abdomen was extremely tender to the touch; she had no sleep, no appetite, and vomited everything; poultices were applied to the abdomen, which gave some relief. The abdomen was tense over its lower part, especially in the iliac fossæ, where was some fulness which was distinguishable externally, but still more *per vaginam.* The cervix was depressed, conical, increased in length and thickness, and pushed to the left side; the whole uterus was enlarged and very tender; the right *cul-de-sac* felt full. Fifteen leeches were applied to the right iliac fossa and some relief followed, which was increased by continued application of poultices and warm baths. She left the Hospital on the 11th, but returned on the 13th with a repetition of the symptoms; these again yielded to the application of leeches, poultices, and baths. On the 20th she had an attack of erysipelas of the face. On the

22nd the uterine pain returned with extreme severity. The patient writhing in bed; in the evening a discharge came on, and on the following day a clot was expelled, after which the pains gradually ceased, and by the 27th she was tolerably well; the swelling in the iliac fossæ had entirely disappeared; the uterus alone remained enlarged, and to it the sense of weight in the pelvis was attributable. A fortnight after even this had disappeared; the uterus had decreased in size, though the cervix remained very large. I saw her again after the next menstruation, she was still very well, but the period presented the same phenomena as had characterised it previously.

Case XXII.—*Cancer of the cervix; retention of blood; enlargement of the uterus; violent expulsive pains for five days, followed by the extrusion of a clot and hæmorrhage; cessation of pain; repetition of the symptoms the following month.*

M. B. aged 38, admitted into *la Pitié*, the 12th December, 1847. She began to menstruate at 13, and was always regular, without pain, and with moderate discharge. She married at 18, and has been pregnant five times, her pregnancies and labours being natural. Three years ago she was in great grief at the time of menstruation, and ever since then instead of its lasting three days, it has been seven or eight. She has also suffered from pain in the back, and occasional uterine colic. In July last menstruation was extremely painful, and a week or so after it she had an attack of bleeding which lasted thirty days. Since then it has recurred every fifteen days, and has gradually undermined her health. On the evening of her admission, bleeding came on, which lasted a fortnight. The lower part of the abdomen was very tender, and tense, but no tumour could be discovered. The uterus was placed somewhat to the right, the anterior lip was enlarged, indurated, and irregular, upon it was a growth, hard, and of a yellowish-white colour. In the left *cul-de-sac* some induration could be felt. The uterus was moveable; there was no discharge. Constipation: no tenesmus, no formication of the thighs.

January 2nd.—She was in extreme pain, and there was difficult micturition. A tumour could be felt over the lower central part of the body. The cervix was enlarged; the uterus dilated, and its tissue indurated. There was slight discharge, and the parts were very tender. Ordered poultices, and rest.

12th.—On the 4th, 5th, and 6th, expulsive pains continued, and were accompanied by the extrusion of coagula; these have now

ceased. Abdomen somewhat enlarged. Uterus slightly enlarged, hard, fibrous, and nodular. The left vaginal *cul-de-sac* is fuller than normal; there is no discharge.

February 2nd.—For some days all seemed going on well, but the pains returned with severity, and the uterus increased in size. On the 4th the pain ceased, and the discharge which had stopped, returned. During the next few days it increased, but again stopped on the 10th, and, a few days after, the patient left the Hospital.

On the 23rd the discharge became excessive, and she was re-admitted; the pains were not severe, and in a few days she so far recovered as to be able to leave the Hospital.

I never saw this patient again.

I will not recapitulate the peculiarities which this case presents, because every practitioner must have met with cases of cancer uteri, occurring before the cessation of menstruation, in which symptoms resembling those I have described have occurred, though they may not have been interpreted in the same way. It clearly establishes, I think, this fact, that dysmenorrhœic accidents, the result of narrowing of the os, may occur wherever there is increased volume of the cervix, whether that be caused by simple engorgement and hypertrophy, or by the existence of any organic deposit, such as cancer. The obstruction is the prime factor, and, in the cases now under consideration, the mechanism of the retention is precisely the same as in retention of urine from enlargement of the prostate. I am anxious that this should be generally accepted, viz., that dysmenorrhœa which results from enlargement of the cervix uteri deserves the name *mechanical*, quite as much as that which results from atresia of the cervix, that it may give rise to the whole series of phenomena which occur in imperforation, and may lead to effusion of the menstrual secretion into the peritoneal cavity. I should not so often reiterate this opinion were it not for the fact, that the conclusions laid down by me in 1848 have been disputed. Moreover, the idea that an obstruction may give rise to hæmatocele, and all its sad consequences, is of far greater practical importance than any of the theories which, since the appearance of my first work, have been put forth to explain the development of this affection. I need not here enter upon the consideration of those theories which up to the present time have remained barren of any therapeutical application, because I shall have to allude to them in discussing the question of hæmatocele being not a disease itself,

but a symptomatic affection. I will only state, that I have never held the opinion, that all intra-pelvic effusions of blood depend upon any one cause, and notably that of menstrual obstruction; on the contrary, as I shall show in the following pages, these hæmatoceles result from a variety of morbid conditions, not the least important of which, however, is menstrual retention.

Section V.—Menstrual retention from adventitious deposits in the uterus.

In the fifth class which we have now to consider, the menstrual excretion is, as I have already shown, temporarily disturbed by the interposition of an organic product, developed either in the cervix itself or in some part of the body of the uterus. This class includes a large number of cases, for the deposit itself varies much in different cases. I think, however, to avoid complication, it is possible to arrange them in two divisions. In one, the obstacle is due to the presence of a polypus, using that word in its generic sense; in the other, to a sort of membranous deposit, a kind of deciduous structure produced by a process of moulting in the uterus, which in these cases occurs at each menstrual act, and deserves the name given to it by English authors, viz., pseudo-membranous dysmenorrhœa.*

I shall only now consider the former of these two, because it is generally understood that polypi, whatever their nature, may occasion a mechanical difficulty to the uterine excretion; indeed, this has been regarded as one indication of their presence. The following is a fair example of this kind:—

Case XXIII.—*Chronic leucorrhœa; dysmenorrhœic pains increasing each month for a year; admission into the Hospital; extrusion of a fibrous polypus from the uterus after a most severe attack of pain; extirpation; three days after, pelvic peritonitis, followed by thickening of the posterior vaginal* cul-de-sac, *resembling a chronic retro-uterine phlegmon.*

R. P., aged 35, admitted into *Lourcine* 23rd May, 1854, complaining of a long-continued white vaginal discharge; is of a scrofulous habit. She had no symptoms of menstruation till about 19, when she was seized with severe colicky pains which returned the following

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* Oldham. *London Medical Gazette*, 1846, vol. ii. p. 970. Simpson. *Edin. Monthly Journal of Medical Science*, September 1846, p. 161.

month, and still more severely at the third month. For this she was admitted into *Hôtel Dieu*, where she remained a month, and was discharged relieved, but not cured. A few days after some dark clots passed, and this was repeated every week for five months. Then all discharge ceased for five months, but she was free from pain. At the end of that period she had slight hæmoptysis which she ascribed to the amenorrhœa. Menstruation came on the following month, and continued regular afterwards, moderate in quantity and without pain, until the last few weeks.

Two years after she began to menstruate, that is, in her 23rd year, she became pregnant, and was delivered at full term of a still-born child. Menstruation returned two months after, and continued regularly afterwards, but she did not become pregnant again. During her pregnancy she was subject to a rather profuse leucorrhœal discharge with some pains in the back, and this reappeared after the cessation of the lochia. It was on this account that she applied for and received admission into *Lourcine* Hospital in 1850. It could not then be determined what was the cause of the discharge, nor whether or not it was contagious. The affection was then described as uterine catarrh; the discharge was pale; the menses were regular, painless, scanty, and almost colourless. While in the Hospital she took ferruginous preparations, and was cauterized every week. She left it relieved, but not cured. Menstruation still continued regular and without pain till last year, when it began to be painful.

On admission into the Hospital in May, 1854, she was again suffering from increased vaginal discharge, and, in addition, from severe dysmenorrhœa. The following note was made the day after:—

May 24th.—Menstruation is now at its height; all pain has ceased. Micturition is frequent and abundant, and followed by tenesmus. She has a healthy appearance, and the other functions are normally performed; there is no abdominal tenderness, nor enlargement, but some tenderness exists in the anterior lip of the cervix uteri, the direction of the cervix being towards the sacrum. The body of the uterus is also retroflexed upon the cervix, and the latter is somewhat enlarged and indurated, but not generally tender to the touch, it is pretty freely moveable in all directions. There was no syphilitic history. Ordered rest in bed, and poultices to the abdomen.

June 1st.—Menstruation lasted four days; after which rather severe pain came on in the lower part of the abdomen, accompanied

by frequent micturition and tenesmus vesicæ. No formication of the thighs; vaginal discharge free and of greenish colour; os slightly open; passage of the uterine sound obstructed at the cervico-uterine orifice, after overcoming which it entered freely the uterine cavity. Ordered, intra-vaginal sponge; alum injections morning and night; Vichy water to drink.

June 8th.—Sense of pelvic weight diminished; the cervix uteri has become twisted half round, so that the retroflexed fundus uteri occupies the left side of the pelvis; ordered to continue the vaginal sponge, smeared with belladonna.

16*th.*—Yesterday the patient experienced a good deal of pain through the pelvis, and this morning it has taken an expulsive character. The cervix is very low, tender, and open; menstruation has not come on to its time. The abdomen is painful, especially over the lower part; the retroflexion has disappeared, and the posterior wall of the uterus is now turned to the right; the entire organ is enlarged. Ordered four leeches to the cervix, and a hot bath afterwards, rest in bed and poultices to the abdomen.

29*th.*—Menstruation came on after the leeching, and was abundant for three days; the expulsive pains have ceased, but the abdominal and lumbar pains have increased. The vaginal examination revealed the same state of things, except that the cervix is remarkably thinned, and the os dilated so as to admit the finger when a large round body could be felt, but no pedicle. By the speculum a tumour could be seen coming through the os, and the sound passed freely round it.

July 3rd.—There is a constant muco-sanguineous discharge. Micturition is frequent, tenesmus vesicæ painful, vaginal examination the same; the attachment of the tumour cannot be made out.

From the 7th to the 10th ergot was administered internally, and belladonna to the cervix in order to secure dilatation, it having been determined by M. Gosselin to remove the polypus. For this purpose the uterus was drawn down, the cervix was divided on both sides, and the polypus (fibrous) speedily detached; there was no hæmorrhage of importance.

On the 11th she was very comfortable, but less so next day, having had some abdominal pain; the os was very patulous; a sanguineous discharge continued. On the 13th the pain increased, skin became hot and dry; pulse 110; rigors in the evening, followed by restlessness, thirst, and great abdominal tenderness; the discharge ceased; the cervix was found to be closed; the posterior vaginal *cul-de-sac*

hot, painful on pressure, resisting; pulse 120, peritoneal. Ordered twenty leeches to the iliac fossæ, and mercurial and belladonna ointment.

14*th*.—The leeches gave some relief; she passed a tolerable night, and is better; abdomen slightly distended and tender. Discharge slight; cervix hard; pulse 110; ordered eight leeches to the right iliac fossa. From this date she improved steadily, and left the Hospital on August the 14th.

There is no doubt that the inflammation of the serous membrane in this case was the result of the operation, and not of the menstrual disturbance; though the latter may give rise to such inflammation, as we shall see hereafter, and as Dr. Oldham has pointed out in his memoir on pseudo-membranous dysmenorrhœa. These cases are, however, very rare, though of their existence there can, I think, be little doubt. The first published cases of the kind were recorded by Madame Boivin, and it may be well to compare those two with one lately presented to the Anatomical Society. In all these the false membranes were expelled entire, and, when filled with blood, they presented exactly the appearance of polypi, and would, no doubt, occasion retention of the menses in precisely the same manner.

Case XXIV.*—*Hollow polypoid tumour, due apparently to dysmenorrhœa.—Extirpation by the ligature.*

Madame V., aged 44, began to menstruate at 17, married at 23, and had her first child at 24. At 26, she aborted at the third month. At 36, she suffered very acutely from the loss of her child, and from that time she has been subject to menorrhagia; for the last three months it has been excessive, and no treatment has been of any avail. On November the 15th, 1819, she had a fall, which was followed by great pain in the hypogastric region. Then defæcation became difficult, and a few days after, while straining at stool, a tumour appeared externally. This she returned into the vagina, but the prolapsus remained and the hæmorrhage continued, though less than before. On January the 8th, a tumour, the size of a fœtal head at term, was felt, and on the 12th Dubois encircled it with a ligature. On the 15th it separated, and the patient made a good recovery.

* Boivin et Dugès, *loc. cit.*, t. ii. p. 419.

CASE XXV.*—*Venereal excess; menstrual suppression; dysmenorrhœic phenomena at the third month; easy extraction of a sanguineous tumour covered with a sort of decidua; cure.*

A young woman of an ardent temperament after some erotic abuse thought herself pregnant, because menstruation had stopped for two months; but at the third month symptoms came on which made her think menstruation was returning. Such, however, was not the case; for though the pain was severe, there was no discharge. On examination, the uterus was found depressed, the os patulous, and within was a soft shining tumour, the shape of a green fig, attached by a pedicle to the cervix; by slight traction it came away, and then it was found to be merely a cyst filled with brownish semi-fluid blood. It was pear-shaped; there was no appearance of fibrous areolar tissue, no trace of blood-vessels, and it entirely dissolved in an alkaline liquid. "It appears to me," writes Chaussier (p. 376), "that this concretion modelled in the uterine cavity had gradually become detached: (1.) by the exhalation which forms continually on the internal surface of the uterus; (2.) by the impulsion and successive accumulation of blood which flows at each menstrual epoch; and as at our visit the tumour occupied only the cervix and os uteri, the slight traction which we made in the examination effected the separation, a proceeding which nature would probably have accomplished ere long." All pain and spasm soon ceased, and she made a good recovery.

CASE XXVI.†—*Menstrual retention of fifteen days, followed by violent uterine colic, and the expulsion of some clots and decidual membrane.*

A woman, aged 33, had for some months been irregular; the last period was fifteen or sixteen days late, and then violent uterine colic came on, followed by the expulsion of clots on August 1st. On examination, a soft membrane was felt, protruding from the cervix, which M. Dufour withdrew with the forefinger, and which proved to be an exact cast of the uterus, having its three openings

* Chaussier, lettre, traduction de Rigby et Duncan, par Madame Boivin, p. 374.

† Dufour. *Bulletin de la Société anatomique de Paris*, 1856, xxxi^e année, p. 321.

corresponding to the Fallopian tubes and os uteri; it was evidently the mucous lining of the uterus; there was no trace of conception within it.

I have brought together these three somewhat similar cases, because they present us with all the morbid phenomena of pseudo-membranous dysmenorrhœa; a disease which, as may be seen by comparing the dates of Madame Boivin's case (1815) with the observations of Dr. Oldham (1846), had been clearly recognised in France long before it was observed in England. The result of the examination to which Dr. Oldham and others have submitted the dysmenorrhœal membrane, establish very positively that this organic product is composed entirely of the histological elements of the uterine mucous membrane, and ought, consequently, to be attributed to a disturbance of the ordinary physiological moulting, if I may so term it, of which the generative organs become the seat at each catamenial period. Unfortunately, this discovery, which was a great advance in the history of a disease that, up to this time, had been very obscure, has, owing to that unfortunate tendency to multiply diseases, of which the doctrines of M. Piorry may be regarded as a salutary exaggeration, led many English authors to regard pseudo-membranous dysmenorrhœa as a distinct morbid entity, deserving of a separate place in our nosological table. Such a conclusion is, however, in direct opposition to the case recorded in Dr. Oldham's paper, which I subjoin.

Case XXVII.*—*History of numerous abortions; uterine catarrh; enlargement and retroversion of the uterus; painful and profuse menstruation, followed by the expulsion of fragments of dysmenorrhœal membrane.—Treatment by leeches and mercury.—Cure.*

Mrs. G., aged 31, became pregnant soon after a miscarriage. Since then she has had several premature labours at the sixth and seventh months. In December, 1844, she complained of a variety of symptoms, all referable, in one way or other, to the uterus: she had a constant leucorrhœal discharge; painful sexual intercourse; and though menstruation was regular, it was attended with violent suffering, and an abundant clotty discharge, accompanied by membranous shreds; the uterus was large and retroflexed, with granular ulcerations. The treatment consisted of leeching, scarifying, rest, and

* Oldham. *London Medical Gazette*, 1846, v. ii. p. 970.

sedative injections. She got well under this treatment, and subsequently brought to Dr. Oldham a portion of membrane which, on examination, he found to be the mucous lining of the uterus. The patient stated her belief that some of her abortions had been nothing else than this. In February 1846, the above symptoms recurred with increased severity; she was then treated by mercury, leeches, and rest; this again cured her for two months. In May it returned, and a similar plan of treatment was adopted, a cure resulting.

In this case, which Dr. Oldham gives as typical of pseudo-membranous dysmenorrhœa, we find united two groups of symptoms. In the first group are those which may be attributed with more or less reason to the exudative affection, and are of an irregularly intermittent character. In the second group are those continuous symptoms which may be regarded as the expression of a permanent morbid condition of the generative organs, which existed concurrently in this patient. It is not necessary for me to enumerate these several symptoms, or to point out their importance. The character of the leucorrhœal discharge, which had existed for many years, is evidence of a chronic affection of the uterine mucous membrane, which Dr. Oldham himself admitted. Whatever then may be the relation between these two affections—the hypertrophy of the uterine mucous membrane, and its separation and expulsion, with more or less of pain and difficulty—it is quite clear that they are in some way dependent upon one another. The question is, whether the uterine affection is the consequence of the functional disturbance or, whether, on the contrary, the latter is symptomatic of the former, as at first sight appears more probable.

This opinion, differing entirely from that of Dr. Oldham, which is, I may add for the information of those who have not read his paper, based on the microscopical characters of the dysmenorrhœal membrane, has very much in its favour. For instance, it is difficult to believe that a non-hereditary functional malady should be reproduced during a series of years, as in the preceding case, and ultimately give rise to a disease of the uterine mucous membrane, without being itself connected with some antecedent disease. I cannot regard the *ovarian influence*, to which Dr. Oldham attributes this affection, as constituting a disease. Its existence should at least be proved, and its nature defined, otherwise it can only be regarded as a mere speculative of opinion, resting upon no positive evidence. It seems to me, on the contrary, that the affection may be legitimately

attributed to those lesions of the uterine mucous membrane, which have been found in all the *post-mortem* examinations of dysmenorrhœal females made in England. The constancy of these lesions is clearly established by the following observation which I extract from an interesting paper read by Dr. Tilt to the Medical Society of London.*

"The pathology of these cases of dysmenorrhœa (pseudo-membranous), is indeed very obscure; because the opportunities of making a *post-mortem* examination are extremely rare. But if, in the few examples to be met with in our hospital museums, you compare the uterus of females who were affected with this form of dysmenorrhœa, with those who died during menstruation, you will find that when the mucous membrane of the uterus habitually exfoliates its superficial layer, that mucous membrane was thicker and more injected than ordinary." I may add, that the existence of the lesions pointed out by Dr. Tilt, especially the well-marked evidence of inflammation in the case which was the subject of his communication, completely annihilates the argument of Dr. Oldham. Relying entirely on the microscopical examination of the dysmenorrhœal membrane, Dr. Oldham believed himself justified by that examination in denying the existence of all inflammatory action, and he therefore regarded it as a specific affection. To show the shallowness of this argument, I might add that the microscopic examination of those uterine fungoid growths, for which Recamier unfortunately recommended the employment of the curette, demonstrates that these exuberances of uterine mucous membrane, which are undoubtedly due to chronic inflammatory action, contain precisely the same histological elements as the dysmenorrhœal membranes. The fact, therefore, is established, that the microscopical characters of the dysmenorrhœal mucous membrane do not exclude the possibility of inflammatory action; indeed it is unnecessary to insist on this point since Dr. Oldham's examination of his own case proves, contrary to his expressed opinion, that the uterine affection, instead of being a consequence of any functional disturbance, was in fact the cause.

I insist the more upon this point, because the solution of this doctrinal question regulates the history of pseudo-membranous dysmenorrhœa: that, whatever it be, which gives rise to this affection, occasions also, I believe, the peritonitis, and the various

* Tilt. *Lancet*, 1853.

uterine deviations resulting therefrom. In the same way menorrhagia which often accompanies the dysmenorrhœa, and the extreme pain which seems to be due to the difficulty experienced in the dilatation of the cervix; all these arise not from any mere functional disturbance, but from the lesion of the genital organs: an inflamed cervix preventing the menstrual excretion in the same way as inflammation of the neck of the bladder, occasions retention of urine.

But I must dwell a little longer on this very important branch of the subject, for up to the present I have implied that the menstrual retention was due in these cases to the obstacle presented by the dysmenorrhœal membrane. Such, however, is not my opinion, on the contrary I believe that the difficulty arises from the morbid condition of the attached uterine mucous membrane, especially the cervico-uterine portion of it. Nor can I accept the view propounded by Madame Boivin; because, though it seemed to tally with the two cases she recorded, it was opposed by those I placed beside hers, though they closely resembled each other in some respects. I willingly allow that the dysmenorrhœal membrane floating about the cavity of the uterus may occasion temporary difficulty to the exit of the menstrual fluid, just as a clot might do so, but I do not believe it could give rise to so serious an obstruction as occurred in the preceding cases, unless there coexisted defective dilatation of the cervix uteri.

These remarks, made in reference to the case of M. Dufour, are especially applicable to that of Dr. Oldham. Here, the shreds of membrane which at different times were expelled with the blood, instead of representing the lining of the entire cavity of the body of the uterus constituted but a small portion of it, and could not therefore occasion any very serious difficulty. The real obstruction was to be found in the morbid condition of the uterus itself. To this, which was indicated by many symptoms in each of the four cases I related, may be attributed the defect in the regular dilatation of the cervix uteri. Under these circumstances the products of the uterine exfoliation which ordinarily pass unperceived are here expelled only with extreme difficulty. The *post-mortem* appearances fully warrant the comparison between this affection and that of retention of urine from inflammation of the neck of the bladder.

I need make no further remark on this point: what has been said seems to me to establish the doctrine that pseudo-membranous dysmenorrhœa, occurring as it does both in internal metritis and in uterine catarrh, cannot be regarded as a specific affection, and that

the temporary menstrual retention which constitutes one of the elements of this disease ought especially to be recognised as the exaggeration of menstrual hypertrophy with a morbid condition of the uterine mucous membrane. The dysmenorrhœa which exists under these circumstances exemplifies one of the general laws of pathology, viz., that inflammation of an excretory canal more or less completely disturbs its normal functions.

These remarks apply equally to all forms of dysmenorrhœa when they are connected with a morbid condition of the uterine mucous membrane, and I believe that in all of them the pain is due entirely to some irregularity in the dilatation of the cervix uteri, caused by the existence of disease in that part. It is even probable that this also is the cause of the menstrual retention which occurs in some forms of uterine deviation, such as those which we have now to consider :—

Section VI.—Menstrual retention from deviations of the uterine canal.

In some of the preceding cases* we have seen that under the influence of menstrual retention and the difficulties which that gives rise to, more or less marked deviations of the uterus, sometimes even flexions of the body and cervix one upon the other, are produced, and this may materially increase the difficulty of the menstrual emission. The deviations in these cases are the result of the functional disturbance, not the cause. But in others the deviation is produced before the occurrence of retention, and thus may be, perhaps, or, at least, may seem to be, the cause of that defective excretion which comes on after the uterine displacement. This restriction shows that since my former memoir† appeared, my opinion as to the influence of deviations has undergone a change, owing, tt must be confessed, to the fact that my friend and co-worker, M. Goupil, has pointed out my mistake. What principally changed my opinion was the observation that dysmenorrhœic phenomena are so very uncertain in cases of deviation. The same kind and amount of displacement being followed and accompanied by very various phenomena. Notwithstanding the doubt as to the real influence of uterine deviations in the production of these affections, I have re-

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* *Vide* Cases XIX. and XXIII.

† G. Bernutz, *Arch.*, t. xix. p. 197.

served for these cases a distinct place, in order to prove that the deviation under these circumstances plays only an accessory part; it will be considered by M. Goupil in the section on uterine displacements, which will form the Fourth Part of this work.

Section VII.—Menstrual retention from spasmodic contraction of the cervix uteri.

In this the most frequent variety, where the symptoms are usually so slight that the advice of the physician is seldom required, the excretion is temporarily prevented by the spasmodic contraction of the excretory canal. This ephemeral spasm, like all contractions of the kind, would never give much trouble were it not that either another morbid condition arises in consequence, or else the spasm itself is associated either with an hypertrophy of the uterus or with an antecedent catarrhal affection of that organ. The following cases, are very interesting from this point of view, especially the first.

Case XXVIII.—*Menstrual suppression on four occasions from anger; the last time accompanied by sudden and severe symptoms; relieved by opiate injections; violent uterine spasms from a dose of ergot; expulsion of putrid blood. Recovery.*

J. D., aged 37, was admitted into *la Pitié*, October 13th, 1847. She began menstruation at 14, and the discharge had since been very free and clotty. She married at 20, but had never been pregnant. Nine years ago she had sudden suppression of menstruation, followed by severe pain in the back and abdomen—for this she was treated, and in twelve days the period came on. Two years after she had an attack of menorrhagia, but this stopped suddenly, and after a few days a swelling was felt in the right iliac fossa. This disappeared by the rupture of an abscess into the bowel, and the discharge of some pus *per anum*. Menstruation came on again in fourteen days and was accompanied by severe colicky pain; the latter and the discharge alternating. She, however, soon recovered, and menstruation was afterwards regular, abundant, and painless. Four years ago, and fifteen days after menstruation, while in a fit of anger hæmorrhage came on, and when it ceased, as it did suddenly, severe abdominal and lumbar pains succeeded.

On October the 7th, 1847, during menstruation, she again had a violent fit of anger, which caused the flow immediately to cease, this was followed by shivering, headache, and fever, pain in the belly and

legs, and cramps in the uterus, with tenesmus vesicæ, constipation, &c. On the 14th there was no pain or pressure above the umbilicus but great tenderness and pain below, and especially in the right iliac fossa. A round, hard, immoveable swelling was felt immediately above the pubis, and here sharp intermitting pains were experienced, which were increased by pressure from within or without. The cervix was situate far back, small, short, hard, and conical: the os closed, the uterus fixed and heavy, the fundus forwards. Eight leeches were applied to the groins, and an opiate injection was admiuistered. This gave some relief, but on the 13th she suffered severe pain through the night, which was again relieved by injection. There was tenderness in the iliac fossæ, and the swelling remained about the same. Pulse 104. Ordered fifteen grains of ergot, baths, injections, and emollients. On the 16th, shortly after a bath, a discharge of black fœtid blood took place. She was much relieved by copious action of the bowels. Abdomen less tender, except over the tumour, where pressure caused great pain. Micturition still difficult, with some tenesmus vesicæ. She was ordered absinth, five grains of ergot every half-hour, for three doses, night and morning; bath, emollient injections, and simple electuary. On the 17th the bath again caused a coloured discharge, which was repeated after some ergot. Then followed severe uterine colic, and a sense of fulness in the left iliac fossa, this soon subsided; she slept well, and began gradually to improve. On the 18th the bath and ergot again caused some discharge and pain, the os was slightly open, the cervix being situate far back, and the fundus forward. The uterus generally was more moveable, smaller, and less heavy; there was no tenderness. Pulse 80. Ordered, absinth, and five grains of ergot three times a day. After this she continued to improve; there was less and less pain, and the tumour gradually diminished. By the 22nd the discharge and pain had stopped, but the uterine colic returned while in the bath, accompanied by some discharge. The uterus remained anteverted, the os open and soft, but there was no tenesmus.

It is unnecessary for me to make any remark on this case, or to show that the menstrual retention, so sharply characterized as it was in this case, could not be caused by the slight old-standing anteversion, since this deviation caused, no doubt, by the former pelvic affection, which terminated in a purulent evacuation by the rectum, did not

occasion any difficulty in menstruation during the preceding seven years. Unfortunately we cannot say the same of the following case :—

CASE XXIX.—*Sudden suppression of menses from washing in cold water; symptoms of peritonitis; formation of hypogastric tumours; re-establishment of the flow; corresponding diminution in the tumours; rapid recovery; induration of the left broad ligament.*

A woman, aged 26, was admitted into the St. Antoine Hospital, 24th October, 1844, she began to menstruate at 15, and had continued regular ever since. At 17 she married, but had never been pregnant. A fortnight previously she washed the vulva with cold water during menstruation, which was thereupon checked. After this she complained of some abdominal pain, especially in the right iliac fossa, which was not relieved by either baths or poultices. The last three or four days she had become worse, with a feeling of general malaise and tenesmus vesicæ. Soon after her admission the pain became much worse, but intermitted with intervals of perfect ease; there was some tenderness all over the abdomen, which was worse on pressure, especially below and in the left iliac fossa. Behind the left Fallopian ligament a tumour was felt which by its position appeared to be independent of the abdominal walls. It adhered to the uterus which was somewhat drawn from the pubis, it was also higher than that organ. The cervix was enlarged, and only about half-an-inch from the vulva; the uterus was slightly moveable, but could not be inclined to one or other iliac fossa, it could be lifted a little. Movement of the cervix affected the iliac tumour; pulse 80; skin cool; she was ordered a purge and to be bled to sixteen ounces. On the 26th she had not slept the previous night, and was in such pain in the right iliac fossa that she could not move; the abdomen was very tender on pressure. Thirty leeches were applied to the upper part of the thighs, and poultices to the abdomen. On the following day she was not so well, and the leeches were repeated. After this she was much relieved by a discharge of blood from the vulva. She was ordered Seltzer water, lemonade, poultices to the abdomen, and an electuary. On the following day she began gradually to improve, the pain and tenderness diminished, as did the abdominal swelling. The cervix uteri was left depressed, and the entire organ enlarged. For a time she was obliged to lie on the right side. On the 14th November she was discharged cured.

I have allowed this case to occupy the place which I gave it in my first memoir,* in order to show that the explanation I then gave of it was not correct. I now recognise that it does not belong to the variety wherein I had ranged it. An analysis of the symptoms which this patient presented, and the order in which they occurred, shows that the dysmenorrhœic pains indicative of the functional disturbance, did not come on till the evening of the day of her admission. Before that, the symptoms were those only which resulted from the condition of the generative organs induced by the patient's washing in cold water during menstruation. Thus the difficulty of the excretion, instead of being the cause of the inflammatory affection of the uterine mucous membrane was, on the contrary, the result, and, in this respect, resembled retention of urine occurring in cases of inflammation of the neck of the bladder. Regarded in this light, the menstrual retention was, as it were, secondary to the traumatic inflammation, which affected the generative organs at the end of the catamenial period. This became more marked on the return of the next menstrual period, and involved either the left tube or ovary. Then pelvi-peritonitis followed, not from the migration of blood into the abdominal cavity, but merely by contiguity of structure.

It is unnecessary for me to dwell longer on this subject which I shall have again to discuss at length in a succeeding chapter.† I ought, however, to state, that we can never hope to produce a return of menstruation until the peritonitis has subsided.

I have taken care to insist on the error committed in my former remarks on this case, and to make it understood that it arose from my not having sufficiently studied the order of the occurrence of the symptoms. In the investigation of the diseases of the female generative organs, it is of the utmost importance to study the order in which successive symptoms arise, indeed this order often constitutes one of the principal elements of diagnosis.

Case XXX.—*Sudden suppression of menses from fright and cold; accession of symptoms which increased daily in severity; amenorrhœa for three months with aggravation of symptoms; at the fourth*

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* G. Bernutz. *Archives générales, loc. cit.*, t. xxvii. p. 452.

† Pelvi-peritonitis. See also G. Bernutz and E. Goupil, Recherches cliniques sur les phlegmons péri-uterine (Obs. II.), *Arch. génér. de médec.*, 5e série, t. ix. p. 299.

period expulsion of black liquid blood with violent uterine tenesmus; cure.

A. B., aged 18, had her menstrual period suddenly stopped through fright, and was immediately seized with severe abdominal pains, which, with other inflammatory phenomena, increased in severity for several days though she did not lay up for it. During the three following menstrual periods she had to keep her bed owing to the severity of the pain, no discharge appeared. Antiphlogistic treatment was resorted to at the fourth period, and this was followed by the expulsion of some dark blood after a violent attack of uterine tenesmus. At the succeeding epoch all passed off naturally.

M. Duparque remarks upon this case, "When the skin is chilled in females, it excites by a sort of sympathetic influence a spasmodic contraction of the os uteri. The same thing takes place under the influence of mental impressions; in the rigors of intermittent fever, &c. When these causes are in operation at the beginning of menstruation, or at the approach of the menstrual molimen, they prevent the preliminary stage of congestion, and thus amenorrhœa occurs without there being any uterine affection. But when the menstrual molimen is in full activity, the suppression of the flow is followed by local phenomena which indicate a morbid condition of the uterus, as was met with in the preceding case. It is very desirable to recognise that in these cases, the amenorrhœa is not the disease, but an effect, a symptom or consequence of the uterine lesion.

"That class of medicines called emmenagogues, which are mostly taken from the stimulant order, whose effect is to provoke or increase uterine congestion, cannot be otherwise than hurtful. Bleedings, emollients, and baths, are the best means of dissipating the congestion and of reducing the uterus to its natural condition, so as to fit it for the performance of its ordinary functions."

It is evident that as applied to the foregoing case, these remarks are entirely hypothetical. There is no proof that the fright which stopped the flow produced a congestion. The dull, heavy pain in the hypogastrium, the creepy chilliness and sense of suffocation which the patient experienced almost instantly, these are not indicative of uterine congestion. The more violent pains in the loins and hypogastrium, the increased volume and firmness of the breasts, and the loss of appetite, &c., these do not favour such a

diagnosis. They all, with the exception of the hypogastric and lumbar pains, occur in the case of uterine repletion, no matter what the cause; M. Duparque himself recognised their analogy to those which occur in pregnancy.

Granting, however, that there was in this, as in preceding cases, repletion of the uterus, I willingly allow that this may have been produced through sympathy; but then I hold that this would give rise to a spasmodic contraction, not of the exhalant orifices merely, if at all, but of the neck of the uterus, and especially of the cervico-uterine orifice.

This supposition limits the spasmodic act to a purely muscular organ, and in all probability such a spasm occurs in a modified form during every menstrual act. It would appear in short, that menstruation, abortion, and labour, present the same physiological travail; the difference between them is simply one of degree and as to the character of the ejected product. Modern investigations point to the conclusion, that the expulsion of a non-fecundated ovule occurs at every menstruation, that abortion is the expulsion of an ovule arrested in its development; and labour that of a viable product. When under these latter circumstances there exists contraction of the neck of the uterus, the uterine action is more energetic and pain is felt in the lower part of the back and stomach.

If the expulsive effort remains without effect, the repletion is increased at each succeeding menstruation, but whether in M. Duparque's case the obstacle was caused by simple contraction of the cervix cannot be determined as no note of its condition is made. The fact of engorgement is, however, admitted; for M. Duparque remarks, "All causes which excite congestion in excess of the exhalant power of the uterus may occasion an acute or chronic engorgement of that organ." Such a condition occurs sometimes through the irritating influence of a foreign body when the uterus tries to expel it. It may also give rise to a state of retention, but I confess I do not understand how the causes acting in the case just cited could have instantaneously produced such an engorgement as suddenly to arrest the flow.

There is no doubt that congestion of the uterus can and does produce suppression and retention and occasions severe uterine action. In the case now quoted such was the condition, and only after the adoption of antiphlogistic treatment was the obstacle overcome so as to enable the escape of the menstrual fluid. Until this

took place the pain continued, but it ceased so soon as the uterus was relieved of its contents, and thereby enabled to resume its proper functions, which it did after a month's rest.

The remarkable feature in all the cases recorded under the fourth head, is the *sudden* suppression of the flow during menstruation. In Cases XXVII. and XXIX., where the suppression occurred some few hours after the commencement of the discharge, the resulting symptoms were very serious. As a rule it will be found that the severity of the symptoms is proportionate to the amount of discharge, the escape of which is prevented. In Case XXVIII. where the retention occurred only towards the end of the period the complications were comparatively slight.

In cases of spasmodic contraction of the cervix uteri similar phenomena result. These are generally met with either in hysterical or chlorotic persons, or where there is some congenital defect which is common perhaps to all the female members of a family, being, in short, a kind of neurosis similar to that of asthma. This form of dysmenorrhœa usually terminates spontaneously after a few hours or days of suffering by the production of the catamenial flow, after which, and until the following period, all appears to be quite well.

Section VIII.—Menstrual retention from abnormal conditions of the Fallopian tubes.

Difficulties of a very different order are met with in the cases now under consideration, namely, those where the menstrual retention is caused by some defect, congenital or acquired, of the Fallopian tubes, especially at the *ostium uterinum*. Indeed in these cases uterine symptoms, properly so called, are completely wanting. The expulsive effort which characterizes dysmenorrhœa instead of being situated in the womb, is here limited to the tubes. Hence the difficulty of diagnosis; for hitherto this affection has not been studied; and, moreover, the physical signs derived from a digital examination are very easily mistaken. The number of recorded examples of this kind is consequently very limited; indeed I have only been able to collect the three following, which I may arrange in one group, though they present very important differences. The first is an example of congenital imperforation of the tubes; the second, of inflammatory obliteration of those parts; and the third, an instance of narrowing of the *ostium uterinum* by an organic growth.

CASE XXXI.*—*Absence of menstruation till the twenty-fourth year; accession of lumbar and abdominal pains; dysmenorrhœa; formation of a tumour in the lower part of the abdomen simulating retro-uterine hæmatocele; sanguineous discharge from the vagina, supposed to be menstrual; puncture of the tumour; death. Post-mortem examination; imperforation and great distension of both Fallopian tubes; phlebitis.*

A. W., aged 28, was admitted into the Hospital *Beaujon*, October 4th, 1847. She had never menstruated, and up to 24 years of age had had no symptoms referable to the generative organs; she then had pains in the loins and hypogastrium, and these recurred every month for four years. During the last two years a swelling the size of an egg had come at certain times on the right side of the hypogastrium; she did not know whether this was affected by menstruation. She had pain in passing water, but no constipation. There was dulness on percussion over the lower part of the body with some tenderness, and a swelling was felt in the situation mentioned above, which was absolutely dull. On examining, *per vaginam*, a tumour the size of a fœtal head was felt occupying the entire brim of the pelvis; it was hard, tender, and painful; no fluctuation. The cervix was to the left side; the uterus retroflexed and only its left side could be felt, the right being lost in the tumour. The cervix was small, like that of a woman who had never borne children. For two months she remained much the same; had emollient and anodyne applications, and iodide of potassium rubbed in. On November the 15th she had rigors, followed by fever; pulse 120. There was a slight discharge of blood from the vulva. By the 23rd the discharge had increased somewhat; the feverishness had subsided, but to-day it increased again with more pain; twenty leeches were applied to the abdomen. On the 24th the abdomen was tender on pressure externally, and also *per vaginam*. The tumour was hard and tender, the feverishness remained, and there was slight discharge.

December 3rd.—M. Huguier introduced a trocar into the tumour by the abdomen hoping to come upon adhesions; a pint and a-half of chocolate-coloured fluid escaped. The tumour was found to be

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* Besnier. *Bulletins de la Société anat. de Paris*, 2e série, t. iii. juin, 1858, p. 286.

firmly adherent to both bladder and rectum. In the evening after the puncture a shivering fit came on, followed by great pain in the abdomen. Mercurial inunction was ordered; twenty leeches; and croton oil to the thighs. On the 7th she was much better. On the 8th Huguier introduced a trocar, *per vaginam*, and a pint of extremely fœtid bloody fluid escaped, followed by a fœtid gas. Iodine was then injected, and a bougie was kept in. In the evening shivering came on with vomiting; pulse 130; extreme pain in the abdomen; twenty-five leeches were applied. On the 9th she was better; warm water was injected, which returned fœtid and of a yellow colour. On the 10th she was much worse and appeared to be sinking; counter-irritation was resorted to, with warm-water injections. On the 11th and 12th iodine was injected and a fœtid discharge followed. Huguier thought that gangrene of the cyst had occurred. During the next week she improved; the tumour diminished in size, and the dulness on percussion over the abdomen was less in extent. From December the 24th to the 30th she gradually became worse and worse, and sank from exhaustion and diarrhœa on the 4th of January, 1858.

Post-mortem examination.—On opening the abdomen diffuse peritonitis was seen, and some black, fœtid pus was found in the pelvis. Adhesions abounded everywhere. The liver was enormously enlarged and friable; the rectum, uterus, broad ligaments, and bladder were covered with false membrane. The left Fallopian tube was dilated in all its extent; at its lower free portion corresponding to the ovary were two cysts, the size of a pea, containing a clear, transparent, colourless liquid; and at the free end was a tumour the size of a pigeon's egg containing some semi-fluid chocolate-coloured matter. There was no opening between the uterus and the tube. The left ovary was smaller than usual. On the right side of the pelvis was an irregularly-shaped pouch, which at its inferior part was in a state of gangrene, its walls being rugose and contracted. The size of the whole was that of an adult's fist. The uterus was healthy; the right tube and ovary could nowhere be demonstrated. The superficial veins of the right arm, the axillary and subclavian, were all filled with coagula, which extended into the brachio-cephalic and superior vena cava, as also the right external jugular vein. Very much the same condition existed on the left side. The internal jugulars were both healthy.

CASE XXXII.*—*Menorrhagia; symptoms of internal effusion from mental emotion; death. Post-mortem examination; intra-abdominal effusion of blood from rupture of a cyst formed by the right Fallopian tube, the uterine orifice of which was closed by a fibrous tumour.*

A lady, aged 28, had always enjoyed good health till some months before her death; she then had menorrhagia which increased and continued so long that it was thought to have been a miscarriage. During a time of severe mental trial, she was suddenly seized with violent pains in the abdomen, fainting and vomiting. There was then no discharge. She sank soon after with symptoms of internal hæmorrhage.

On *post-mortem* examination a good deal of blood was found in the abdomen and pelvis. All the organs were healthy except the left Fallopian tube, which presented a tumour the size of a pigeon's-egg; this was ruptured, and, on its surface, was a small transparent cyst covered with filaments of the tube. At its junction with the uterus, this tube was rendered impervious by a small fibrous tumour.

CASE XXXIII.†—*Metro-pelvi-peritonitis following labour; amenorrhœa; death from pneumonia fourteen years afterwards. Post-mortem examination, tumour formed by retained menstrual fluid in both Fallopian tubes; obliteration of the tubes.*

A woman, aged 36, stated that she began to menstruate at 16, that she married at 21, and was delivered of her first child at 22. Three days after she had a severe inflammatory attack which appears to have been one of metro-peritonitis. She was bled freely and recovered, but since then has never menstruated, nor been pregnant again. Every month she experienced symptoms of menstruation, but none came. She died of pleuro-pneumonia. On making an examination after death the tubes were both found to be dilated to the diameter of an inch, and contained a brown, viscid, inodorous fluid. Both ends of the tubes were perfectly closed. The parts are represented in Carswell's *Atlas*, Plate XVII.

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* Fauvel. *Bulletins de la Société anat. de Paris*, xxx^e^ année, 1855, p. 395.

† Becquerel. *Traité clinique des maladies de l'utérus et de ses annexes.* Paris, 1859, t. ii. p. 278.

The principal feature in each of these cases was the distension of the tubes with blood: in the first case this was due to congenital imperforation; in the second to the existence of an organic constriction; and in the third to cicatricial obliteration. The state of repletion common to them all, and its periodical increase at each menstruation proves unmistakably that these organs play an important part in this function, and that when the product of excretion is prevented from escaping, the tubes become transformed into blood-cysts. It is important to bear this in mind as it throws light upon the vexed question of the formation of tubo-ovarian cysts. When blood is thus effused into the Fallopian tubes it undergoes the same modifications as take place under similar circumstances in other parts of the body, consequently the blood is soon replaced by fluids which resemble those contained in certain cases of encysted dropsy of the ovary.

These three cases justify our attributing the origin of a certain number of diseases arbitrarily comprised under the name of encysted dropsy of the ovary, to a defect in the menstrual excretion, as I pointed out in my memoir in 1848, and they specially point to this as the cause of a large number of tubo-ovarian cysts.

Happily, in one of the cases above detailed, the menstrual secretion ceased, and with it the further distension of the tubes; the blood therefore remained encysted, and formed a tumour on each side of the uterus, but did not otherwise interfere with health. In the two other cases, on the contrary, the distension was carried to such a point that rupture took place, the blood extravasated into the abdominal cavity, and gave rise to a fatal hæmatocele. These various terminations enable us to demonstrate anatomically the lesions which exist at different periods of the same morbid process, and they exactly illustrate what I have previously described as belonging to the last stage of menstrual retention—only in those which we are now considering the uterus remains meanwhile intact. The case published recently by M. Menière illustrates what I have described as the second stage of menstrual retention, that which is characterised by distension and repletion of the uterus and tubes; while the two other cases represent the third stage, namely, rupture between the tube and the ovary, and the consequent escape of the retained blood into the abdominal cavity. The remarks which I have previously made in reference to stricture of the cervico-uterine orifice apply

mutatis mutandis to the *ostium uterinum* of the tubes. All seems to establish the law that any obstacle to menstrual elimination in a part of the tubo-utero-vulvar canal, leads first to dilatation, then to distension of every part of the canal posterior to the seat of obstruction; and, when the repletion is carried to an extreme point, to the effusion of the retained blood into the abdominal cavity.

The principal difference refers to the question whether the uterus is or is not distended. In the former case the organ reacts upon the contained blood, and this contraction is the cause of dysmenorrhœa. In the latter the uterus is almost completely passive. Whether or no blood which is poured into the uterine cavity will regurgitate into the Fallopian tubes must depend upon the situation of the stricture in the tubes. No doubt the efficient cause of the escape of blood into the abdominal cavity is the distension of the Fallopian tubes, and this may arise either from a difficulty in the escape of their secretion into the uterus, whether this be due to a stricture of the *ostium uterinum*, or to an already distended condition of the uterus itself, in which latter case it resembles pulmonary congestion from aortic constriction; or, it may arise from a regurgitation of the uterine secretion into the Fallopian tubes by the contraction of the uterus upon its contents. Here the resemblance is to pulmonary congestion from aortic constriction, coupled with insufficiency of the mitral valve. The reflux of blood from the uterus into the tubes is then one of the causes of the extreme distension which these organs undergo in cases of menstrual retention, and of the consequent passage of blood into the abdomen. But it is not indispensable that these two conditions should exist. They do not, indeed, occur in the eighth class: here the absence of uterine symptoms separates it from all other forms of this affection.

In the two first varieties of menstrual retention, arising either from congenital imperforation of some part of the vulvo-uterine canal, or from an occlusion of the vagina or uterus occurring after puberty, the impediment cannot disappear spontaneously. The extreme gravity of the symptoms therefore invariably necessitates the having recourse to artificial measures for the establishment of the catamenial functions. The frequent occurrence of a fatal termination after the performance of these operations, though it inspired Boyer with an invincible repugnance to such interference, would seem to indicate the necessity for early operation. We ought, indeed, if possible, to operate before the genital organs have undergone any very marked distension: for,

under these circumstances, even the simple puncture of a distended hymeneal membrane may be followed by the passage of blood along the tubes into the abdominal cavity, and lead eventually to death.

In the third variety, where menstrual retention is caused by congenital or acquired atresia of the vulvo-uterine canal, surgical interference may be equally necessary. This, however, only occurs where the coarctation of the vagina or cervix is carried to such a point that it is the efficient cause of the defective excretion. In other cases, nature alone, aided perhaps by medical treatment adapted to the circumstances, suffices for the re-establishment of the function. But, after any such improvement, attention should be directed to the vulvo-uterine canal, to determine whether the constriction is really the cause of the inflammation of the cervico-uterine mucous membrane, or of the engorgement of the cervix upon which the retention depends. Because the indication then is to remove this constriction, and with it the difficulty in the excretion.

In the fourth variety, those, namely, which are due to an enlargement of the cervix, whatever may be its nature, there are several indications to be attended to. In all of them, the mechanical nature of the obstruction is the same, and they all indicate the necessity for dilatation. But the nature of the hypertrophy being so dissimilar, no one mode of treatment is applicable to all. Both the prognosis and treatment must necessarily vary according as the cervical enlargement is due to congestion, to acute or chronic inflammation, or to any organic deposit in the cervix, whether of a benign or malignant character. In the former, indeed, the treatment must recognise whether the deposit be limited to the cervix, or whether it invades the body of the uterus.

The same indications hold good in one of the cases of the fifth variety, where, for instance, a polypus obstructs the cervix uteri. Here it is necessary, first, to dilate the os, and, then to remove the polypus. In other cases, those namely of pseudo-membranous dysmenorrhœa, the obstruction is, as it were, a secondary phenomenon, caused by the menstrual secretion itself being enveloped in an exfoliation of the uterine mucous membrane. Here, inflammation of the lining membrane of the uterus, which interferes with the proper dilatation of its cervico-uterine orifice, is the real cause of obstruction. Nature will, in many such cases, remove the difficulty, but it surely reappears if the catarrhal affection of the uterus remains. The indication then is to reduce this inflammation, and as this is generally

a diathetic manifestation, treatment ought especially to be directed to that object.

The remarks now made on the fifth variety are almost equally applicable to the sixth, that is to cases of menstrual retention dependent on some form of uterine flexion.

The retentions composing the seventh variety, viz., cases of spasmodic contraction of the cervix, may be arranged in two classes, each differing from the other both as to prognosis and treatment. In the one, indeed, the uterine spasm, due either to mental emotion (Case XXVIII.), or to some physical impression (Case XXIX.), or to the two combined (Case XXX.), may spontaneously disappear after a few hours' or days' duration, and the re-establishment of the flow may take place before the functional disturbance has led to any organic change. This is so frequent a result that I have not thought it worth while to quote an example, for the physician is very rarely consulted in such cases.

In purely nervous dysmenorrhœa, due either to an hereditary peculiarity of the nervous system, or to some other affection; the principal indeed, the first indication, is to combat that upon which the menstrual retention depends. Here the intervention of an accidental cause is unnecessary. The chief characteristic of these cases is, a monthly repetition of an extremely painful expulsive effort, coming on without any apparent cause, and lasting for a certain time before the actual appearance of the catamenial secretion: the latter usually leads to an abatement of the suffering. In spite of the intensity of these pains which are sometimes so acute that the patient will writhe in bed; the prognosis is generally less grave than that of any other variety, at least, as regards the question of life. Usually at the end of a limited number of days or even hours, uterine contractions become regular and complete the expulsion of the menstrual product. It is very seldom in these cases that we meet with any disease, either of the cervico-uterine mucous membrane, or of the parenchyma of the cervix as a result of the dysmenorrhœa. Nevertheless, the prognosis is to some extent unfavourable, inasmuch as there is a great tendency to perpetuation, and they also share in the almost utter incurability of the affection from which they proceed.

The hysterical dysmenorrhœa* is not uncommon: indeed, dysmenorrhœa is very often the first indication of that disease. Still this does not justify the opinion of Scanzoni * and others, that the

* De Scanzoni, *traduct. française*, pp. 106, 157, 163.

uterus is the seat of hysteria. It is impossible indeed to localize that affection, it is one *totius substantiæ*, an abnormal physiological condition which modifies all the organic actions, and reveals itself rather by dynamical disturbances of the several functions. It may, therefore, disturb the genitalia in common with the rest, though it need have no necessary or constant connection with them. I may content myself with this simple expression of my opinion, as it might otherwise, if I did not allude to it, be thought strange that I have omitted it from the consideration of nervous dysmenorrhœa.

But to resume our subject: I have specified the leading characters of the eighth variety, which is distinguished especially from all others, by the fact that the obstacle is situated at a part of the vulvo-ovarian canal beyond the uterus, namely, in the Fallopian tubes, the uterus itself taking no, or but a small part, in the pathologal travail. The symptoms ought, no doubt, to vary according to the nature of the obstacle and the different conditions under which it occurs: as for instance, whether there be obliteration or merely constriction of the oviduct. It is, however, impossible to particularize and enumerate all these. The cases which I have recorded illustrate the differences between tubar menstrual retention arising from congenital imperforation, and that due to obliteration occurring after puberty.

The conditions which give rise to retention differ not only as regards their termination, but also as regards their commencement and progress: and these are important questions in reference to diagnosis. In congenital defects of the vulvo-uterine canal, the symptoms commence at the period when puberty is being established, and before any discharge has occurred; one is then disposed to attribute them merely to difficulties in the establishment of so important a function in the female economy. In such a case there has been little or no antecedent disturbance; there is an almost absolute calm between the several attacks of pain, the exacerbations are infrequent and irregular, and there is usually but little reaction on the constitution. The genital organs then become enormously distended by menstrual secretion, and herein lies the great danger of operating.

In all the other varieties the retention is preceded by a certain number of menstrual periods at more or less regular intervals; the mischief occurring at a variable time after puberty is established. In spite of this distinguishing feature of congenital imperforation, the onset of the first and second varieties presents a close analogy

in those cases where the cicatrix completely closes the excretory canal. The analogy to which I refer is not met with in any of the next five varieties: there is not only absence of menstruation, but even of all sign of menstrual molimen, and the symptoms resulting from this commence with the return of the menstrual period after the patient's recovery from that which was the *fons et origo mali*. Thus, when the cicatrix results from difficult labour, the first disturbance begins some six, eight, or more weeks afterwards. But whenever it commences it is always in connexion with the re-establishment of this function; the time which elapses between the formation of the cicatrix and the return of menstruation varies according to the severity of the disease or of the operation which was the immediate cause of its formation. In Case XI., for instance, the symptoms began at the succeeding period, while in Case XIV. three periods elapsed, and in the case of gangrene of the vagina, communicated by M. Goupil, nearly nine months passed before menstruation was attempted.

There are other points of resemblance between these first two varieties, viz.: as regards their commencement; they usually begin with slight symptoms which go on uniformly increasing in severity month by month, and though the earlier symptoms may be milder, and the reaction upon the system at first be less serious, yet these cases are far more mischievous than those of congenital imperforation: for while the latter will allow of a precarious existence often for years; the former compromise life in a few months.

Where there is, instead of complete obliteration of the canal, only a constriction which renders the excretion difficult, but not impossible, as in Case XII., the dangers are then greatly retarded, the reason being that time is given for the development of other phenomena. Those which constitute our third, fourth, fifth, and sixth varieties are distinguished from the two first, by the fact that the retention, instead of being subsequent to a more or less complete and prolonged suspension of the menstrual flow, is generally preceded for a longer or shorter time by dysmenorrhœa; that is to say, by transient retention of the catamenial secretion; this is recognised each time by the production of a more or less painful expulsive effort.

The differences which I have pointed out in the intensity and regularity of the return of the dysmenorrhœic accessions, whether

they are produced each month, or at irregularly lengthened periods, may serve in many cases to distinguish the different contractions one from another.

Thus according to the regularity or irregularity of the attacks we may divide cases of obstructive dysmenorrhœa into two groups; the first, to which the name *mechanical dysmenorrhœa* may be given, comprises not only those which result from congenital atresia, to which English authors limit the term, but those also which are determined either by cicatricial contraction, or by increase in the volume of the cervix, or by polypus. They are distinguished from other varieties by the regularity of the monthly return of pain, by its equal severity and duration, or by its regularly increasing severity, the menstrual parturition being accomplished with more or less difficulty according to the amount of obstruction, and the condition of the genital organs. The regularity and persistence of these attacks makes them liable to be mistaken for neuralgic dysmenorrhœa, and the difficulty in diagnosis is increased by the frequent coexistence of a morbid condition of the uterine mucous membrane, which destroys the distinctive features of mechanical dysmenorrhœa.

In the several varieties of dysmenorrhœa symptomatic of inflammation of the uterine mucous membrane, the obstacle is due to temporary defective dilatation of the uterine orifice. They are distinguished by the irregularity of the attacks, according to the severity of the catarrhal metritis. When the condition of the uterine mucous membrane has resulted in an hypertrophy of the cervix, the dysmenorrhœic attacks occur every month, though with varying intensity. The differences and irregularities which characterise these varieties make them liable to be confounded with those due to chlorosis, anæmia, or hysteria; the more so as these latter conditions often lead to uterine catarrh, so that it is difficult to discover whether the dysmenorrhœa is due to defective dilatation of the cervico-uterine orifice from the presence of catarrhal inflammation, or whether it is caused by a purely dynamical spasm.

The seventh variety differs from all others in this, that the retention follows upon a sudden interruption and cessation of the menstrual flow, whether produced by physical or mental impression. The suddenness of the suppression in the middle of a period, the continuance of expulsive pains, the subsequent distension of the uterus, the occasional escape of a certain quantity of altered

blood, and the severity of the symptoms according as the suppression occurred on the first or subsequent days, all these have led me to attribute the retention which occurs under these circumstances to a state of contraction of the cervix, analogous to that which occurs during labour.

CHAPTER II.

SYMPTOMATOLOGY.

The symptoms of menstrual retention, though slight at first, especially in the two first classes, are, as I have said, generally related to the quantity of fluid contained in the uterus. During the first period they are:—the absence of the menstrual flow, a sense of weariness and weight in and about the pelvis, and the recurrence of intermittent pains passing round from the lumbar to the pelvic regions. These pains remain throughout the period, and even continue afterwards when, perchance, expulsive efforts set in, as in Case XXVIII., and bring about a cure of the retention, even during the first period; but if these efforts fail, the pains in a few days diminish. Sometimes the only appreciable symptom left is a sense of weight in the hypogastrium, which is increased by fatigue and especially by walking.

When, after the usual prodroma, the discharge does not come on, the symptoms assume fresh activity. But a variety of circumstances so modify the result that in one case symptoms which occur at the first period may not in others be met with till the fourth. During these periodical exacerbations the hypogastric weight increases, and there is painful defæcation and micturition. The uterus enlarges, the fundus rises while the cervix is depressed, its labiæ are thickened, and the cavity is dilated. The body also is anteverted. At the same time tumours of greater or less size appear, either in the iliac fossa parallel with the Fallopian ligament, or in the right or left vaginal *cul-de-sac*. They are connected either with the sides of the uterus or with the posterior surface of the pubis, the movement of the former being communicated to them. They are tender, elastic, and obscurely fluctuating, and as they increase in size the uterus becomes fixed in its normal or abnormal position, according as the tumour is fixed to one or other side. The pains are for the most part irregularly intermittent, spasmodic, and crampy, resembling those of labour. They are generally well marked, as in Case XIII., where they simu-

lated those which the patient had experienced in a previous labour, and during each expulsive pain the uterus was felt to undergo contraction, the tumour at the same time becoming sensibly larger and more tender. In Case XXVIII. the resemblance of the pains to those of labour was shown yet more by the fact that they ceased under the influence of laudanum injections, and were afterwards increased by the administration of ergot. When the uterine contractions are unable to overcome the resistance of the cervix, they force the incompressible liquid upon which they act into some abnormal passage, which thereupon finds its way into the peritoneal cavity and sets up inflammation. I may, however, remark, that this is not the usual way in which peritonitis is occasioned in these cases, as we shall see in the Chapter on Pelvi-peritonitis; it appears to be produced by a sort of reaction upon the peritoneum from the genital organs being distended with the catamenial secretion.

Among the remote symptoms, the more prominent are those resulting from the nervous erythism produced by almost constant suffering. To this cause are attributable the sense of anxiety and impatience, the continued agitation and restlessness, the sense of suffocation, the violent palpitation, or syncope, the hysterical convulsions, and other nervous phenomena; to the same cause are due the loss of appetite without much thirst, the occasional rigor and slightly accelerated pulse. Precisely the same thing happens occasionally in labour, where the nervous system unduly participates in the struggle.

When the expulsive effort remains ineffectual, little by little these symptoms diminish with the decadence of the menstrual epoch. The distension of the genital organs, and the difficulty in micturition and defæcation, decreases; while the tingling sensation in the thighs, the weight in the hypogastrium, and the intermittent pains, gradually disappear. In like manner the nervous phenomena cease, or are replaced by others of less importance.

This improvement continues up to the return of the next period, when the symptoms reappear with, probably, greater intensity, and seldom cease again so completely, though the aggravation of the symptoms is more manifest during than after the period. Gradually these exacerbations become less severe as the catamenial secretions diminish in quantity, till sometimes they cease altogether, after the system has been sorely tried by the long-continued menstrual retention. This circumstance, and the changes which take place in the

effused blood, considerably modify the attendant symptoms. These I shall consider further on in reference to the steps adopted by nature for rendering such a foreign body innocuous; we shall see that the curative efforts of the organism tend to bring this about in two ways. In the one, the morbid phenomena represent merely an exaggeration of the ordinary properties of the uterus. In the other, on the contrary, inflammatory action and, after awhile, suppuration, is set up round the tumour, and the foreign body disappears in the process of suppuration.

The excitation of uterine contraction gives rise to a discharge of blood which varies according to the duration of the retention, the quantity of the retained fluid, and the amount of relief afforded by it to the congested organs. This salutary effort occurs at different periods; in one case it happens within a few days of the occurrence of retention, in others two, three, four, or more months may elapse. In the majority of cases a hæmorrhage continues more or less abundantly, according to the extent of disease. When the retention has existed for several months, a discharge of blood by drops goes on during the interval, and ceases only when the uterus has relieved itself by a final effort of the last remains of the retention. To this sort of discharge M. J. P. Frank gave the name of *aménorrhée distillante*.* These peculiarities, no doubt, exercise an influence over the ejected fluid, but it is always difficult to appreciate the circumstances which occasion decomposition of a fluid retained in a central cavity: in one case it may occur in a few days; in another not for several months. The latter, however, occurs only in cases of complete occlusion, whether congenital or acquired, where all contact with air is impossible.

The quantity of discharge is also subject to considerable variation, according to individual peculiarities. As a general rule, it is proportionate to the number of periods passed over. Thus in Case XXVII., where only one period had elapsed, the discharge was equal to that of an ordinary period; while in cases of congenital imperforation, where a great many periods have passed by, the quantity of blood evacuated is in general very considerable.

It is remarkable also that these sanguineous discharges do not in any way prejudicially affect the general health; and this is important in regard to diagnosis in those forms of hæmatocele in which

* J. P. Frank, *traduit par Goudareau, loc. cit.*, t. v., p. 229, 234, et suiv.

the intra-peritoneal effusion of blood is the result of a hæmorrhagic diathesis. The various discharges of blood to which women are subject explain the differences in their results. In the menorrhagia which is symptomatic either of a diathetic condition, or of some uterine affection, the discharge of blood which is necessary for the purposes of life, modifies its composition, and thus originates a condition of body exceedingly prone to other morbid phenomena. In cases of retention, on the contrary, when the discharge comes on it is mostly of that only which had been retained, and does not therefore seriously affect the constitution. The real cause of the debility and emaciation which often occurs in these cases is the prolonged continuance of pain, and the occurrence of inflammation in those parts where the effused blood remains as a foreign body.

The discharge of blood which thus happily terminates the retention, is usually accompanied by contractions of the uterus, and resistance is sometimes offered to the process of dilatation of the cervix, which gives rise to a fear lest the blood should escape by some abnormal way. It is under such circumstances that authors have feared rupture of the uterus.* This fear, it seems to me, is unfounded where the uterine walls are free from any alteration beyond the mere distension; at least, I know of no case in which rupture has occurred when uterine the walls were free from disease, benign or malignant. I cannot conceive how rupture of the uterus could occur under these circumstances, since retention of the menses would dilate all the genital tract, and make of it one tortuous canal, each part of which would be variously distended according to its contractile force. The result would be to drive the incompressible fluid into the Fallopian tubes, the walls of which are less resisting. Then the feeble union between the ovary and the tube would be broken down, and through the opening of the latter the retained fluid would escape into the abdomen. This escape immediately gives rise to inflammation of the serous surface, and is characterised by some symptoms peculiar to this variety of peritonitis. There is, first, the time and circumstance of its occurrence; secondly, the formation immediately after of a pelvic tumour or tumours in close relation to the uterus; and thirdly, the accession of severe pain in and about the pelvis, especially in the iliac fossæ. As a rule, I believe there

* Dance, *loc. cit.*, *Archives gén. de médecine*, 1re série, t. xx. p. 530, et suiv.

is no rigor, or at least not until some hours after the attack has begun. After a time the pain becomes exceedingly severe, and the patient very restless; the former is such that no examination can be borne. Soon respiration is quickened, and becomes short, jerking, and tremulous from the pain which movement occasions. I have observed often a peculiarity at this stage in the condition of the abdominal walls—viz., a state of contraction and rigidity, which seems created for the purpose of protecting all parts of the inflamed serous membrane against external pressure. After awhile the abdomen becomes tympanitic and greatly distended. The gaseous secretion, as well as the nausea, vomiting, and constipation which are usually observed in peritonitis result from the disturbance which is created in the digestive function. The pain which hinders the respiratory movements also prevents the contraction of the intestinal muscles, each movement of which is communicated to the inflamed peritoneal covering. The inertia of the intestines suspends the course of the materials they contain, and fæces are no longer ejected. The condition thus resembles that of strangulation.

But to return. In enumerating the symptoms I have omitted the loss of appetite and thirst, with the modifications in the pulse and temperature of the skin, all of which, with the altered expression of face and general prostration of vital power, indicate the disturbance which the peritonitis has produced in the system. This disturbance is, of course, in direct proportion to the inflammation, but it is remarkable that the general reaction does not come on till some time later; so that its appearance indicates exactly when the affection has ceased to be local and is influencing the whole constitution. Thus, then, we are enabled by close attention to the various symptoms to appreciate the progress of the disease;—the extreme sensibility and retraction of the abdominal walls indicate inflammation of the parietal peritoneum; the severity of the disturbance of the digestive canal points to visceral peritonitis; and, lastly, the general condition of the patient is the gauge as to the influence of the attack upon the entire organism.

Distinct as these symptoms are at first, they become after a time so blended together as to be indistinguishable; but in consequence of their traumatic origin the prognosis is certainly more favourable than in other inflammations of the abdominal serous membranes, as was pointed out by Professor Chomel.* Once only have I seen the

* Chomel, *loc. cit.*, p. 578.

disease terminate fatally (Case XXI). Still it must be remembered that I have never had recourse to puncturing a hæmatocele, as was first recommended by Recamier,* and afterwards by Nelaton,† a practice which I cannot but regard as very serious. To appreciate the prognosis of hæmorrhagic peritonitis we should bear in mind the condition in which that patient was who died under my care; her constitution at the time of the attack was profoundly affected by a disease of long duration; she had also at a previous menstrual epoch had an intra-peritoneal effusion of blood and an attack of peritonitis in consequence which had run a chronic course.

In Cases VII. and XV., both of which terminated fatally, similar symptoms prevailed. In them no operation was attempted for the congenital malformation upon which the retention depended, because the peculiarities which existed rendered the prognosis of peritonitis more serious than ordinary. In all these the inflammation only terminates a life which has for long been compromised by the defect of the menstrual excretion. Where operative measures which are necessary in cases of congenital imperforation are delayed for a long time, there is always a risk of the blood escaping into the abdominal cavity, and thus of inducing a more severe form of peritonitis; the reason being, that the delay gives rise to conditions which tend to generalize the inflammation. This, however, does not always take place, for in one of de Haen's cases the symptoms though severe for a time rapidly improved and the patient recovered.

There is less fear of a fatal termination in cases of hæmorrhagic peritonitis, when no attempt is made at puncturing; and when the inflammation is limited to the pelvic serous membrane, the symptoms are still less severe; indeed, the worst are altogether wanting, especially the great sensibility, the tension of the upper part of the abdomen, and the vomiting. When these do exist they are but slight and soon cease. When, however, the febrile condition has passed off, or exists only in the shape of evening exacerbations, the patients are still subject to abdominal pains, which at times are felt very acutely, especially on pressure in the iliac fossæ, making it very difficult to institute an accurate examination.

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* H. Bourdon, *Des tumeurs fluctuantes du bassin (Revue Médicale*, juillet, août, septembre, 1841, p. 59).

† Nelaton, *Leçons orales faites à l'hôpital Saint Louis* (*Gazette des hôpitaux*, 8 fevrier, 1851, p. 61, et suiv).

At this time too we are able to make out the physical signs of the tumour produced by effusion of the menstrual secretion into the abdomen. By its mere gravity it most frequently accumulates in the utero-rectal *cul-de-sac: retro-uterine hæmatocele* as it is called. In the absence of any defect of the vagina, such as is observed in the several varieties of our three first classes, and failing any engorgement of the cervix to modify the displacement impressed on the uterus by the tumour, the physical signs of hæmatocele caused by the passage of menstrual secretion into the abdomen are precisely the same as those occasioned by intra-pelvic effusions of blood, from any other cause.

This circumstance justifies my quoting the two cases published by my friend M. H. Bourdon,* to whom undoubtedly belongs the credit of having described the physical signs of the affection now called hæmatocele. To the two cases contained in his remarkable memoir on *Fluctuating Tumours of the Pelvis*, I shall add a case which M. Denonvilliers† presented to the Chirurgical Society, in order to prove that hæmatoceles are situate in the peritoneum, as I have said, and not in the cellular tissue, as M. Viguès‡ pointed out.

Case XXXIV.§—*Sanguineous tumour of the pelvis; fluctuation felt by recto-vaginal examination; incision of the tumour through the vagina; cure.*

A woman, aged 24, had been confined with her second child eight months, when, a month before admission, she was suddenly seized with shivering, fever, abdominal pain, and tension. On admission into the *Hôtel Dieu*, August 1st, 1840, a hard tumour the size of a fœtal head was felt in the lower part and right side of the abdomen; it was tender on pressure, and slightly moveable. On examination *per vaginam* the tumour was felt in the right recto-vaginal pouch, it was slightly fluctuating. On August 3rd, M. Recamier punctured it *per vaginam*, and some thick red fluid escaped. The walls of the tumour were thick and firm, almost like fibro-cartilage; upwards of a pint of fluid escaped, and the patient was much relieved. Subsequently the tumour discharged freely, and then gradually disappeared.

* H. Bourdon, *Mémoire sur les tumeurs fluctuantes du bassin* (*Revu méd.* 1841).

† Denonvilliers, *Société de chirurgie*, 4 juin, 1851.

‡ Viguès, *Thèse inaugurale*, Paris, 1850.

§ Hipp. Bourdon, *loc. cit.*, p. 19.

She made a good recovery, and left the Hospital thirty-nine days after the operation.

Case XXXV.*—*Sanguineous tumour developed between the vagina and rectum; incision through the vagina; cure.*

A woman, aged 28, had had two children at term, and one miscarriage brought on by violent exertion a short time before admission. For several weeks a bloody discharge followed. On admission into the *Hôtel Dieu* a tumour filling the pelvis was felt compressing the rectum and pushing the uterus forwards; externally it could be felt as high as the umbilicus, and in both iliac fossæ; it was moveable and deeply fluctuating. M. Recamier incised the tumour *per vaginam*, when a quantity of black half-coagulated blood escaped. The patient made a good recovery.

Case XXXVI.†—*Menstrual retention; hæmorrhagic peritonitis; spontaneous opening; death.*

A woman, aged 29, was admitted into the *Hôpital S. Marguerite* on March 8, 1851. In February of that year she had symptoms of menstrual retention. In March menstruation came on, but was followed by peritonitis. A tumour was then felt in the hypogastrium and *per vaginam*. On April 11th she passed a large quantity of black coagulated blood *per rectum*; on May 10th a discharge of blood and pus escaped *per vaginam*; on the 15th symptoms of pyæmia came on, and she died on the 25th.

On *post-mortem* examination the tumour was seen occupying the utero-rectal pouch; the ovaries were large, and presented several lacunæ opening into the bloody cyst, as if the effusion had owed its origin to these partial ruptures of the ovaries. The Fallopian tubes were rather contracted than dilated.

We may observe in these cases, and in those which I shall presently report, that the bloody tumour to which the passage of the menstrual secretion into the abdomen give rise, are characterized—(1.) by the instantaneousness of its development coincident with a catamenial period which is attended by very scanty secretion; (2.) by its independence of the uterus, which it displaces from its immediate con-

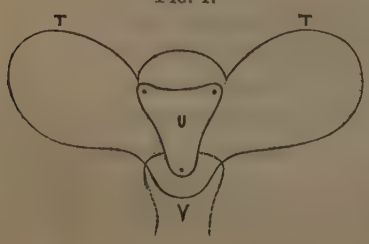
* H. Bourdon, *loc. cit.* p. 81.

† Denonvilliers, *Gazette dès Hôpitaux*, 14 juillet, 1851.

tiguity; (3.) by the differences felt in its consistence at different times, owing to the successive changes which take place in the contained blood; (4.) and lastly, by the periodical intermittence of the symptoms, while the affection of which they are the result, instead of improving, gives rise to fresh effusions, each adding to the bulk of the tumour. The combination of these several characters is indispensable for the purpose of accurate diagnosis, and even with them there is the possibility of error. It is necessary always in making an examination to combine abdominal palpation with vaginal and rectal exploration, following the teaching laid down by my excellent friend, M. Bourdon.

Examining with the hand placed over the lower part of the abdomen, we learn that the upper part of the tumour, emerging into the abdomen, is sometimes of so considerable a size that it reaches up to the umbilicus, and is quite independent of the abdominal walls which glide over its smooth and even surface. The upper limit of the tumour is well defined, not only to abdominal palpation, but also to percussion, a dull sound being elicited over the entire extent of the tumour; while inferiorly it is felt buried in the pelvic cavity; the upper strait of which it fills, being immoveable or almost so by the fixity of its base which may be reached by the finger either in the rectum or vagina. The blood cyst, whether simple or multilocular, forms in the abdominal cavity a tumour of irregular outline, varying according to the circumstances of its development; it may be either in the middle line, or in one or other of the iliac fossæ, or it may be formed of several distinctly defined lobes. This latter condition, which occurred in my first case and in that of M. Satis, which I shall report presently, is almost typical of hæmatocele from defective excretion. In outline it resembles somewhat the figure on a club card, as is seen in the annexed drawing. Fig. 1. This form is given to it by the convexity of the tumours in each of the iliac fossæ, Fig. 1. T, which are parallel with the Fallopian ligaments; between these two tumours in front appears the fundus uteri, Fig. 1. U, which is distinctly separate from them by a groove. Behind the uterus the two tumours appear to meet by the formation of a third lobe, which is more or less distinctly felt, according as it rises

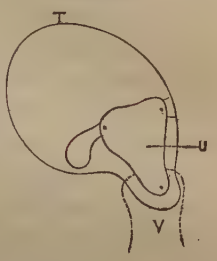
Fig. 1.



above the level of the fundus uteri, which it surmounts as the epididymus does the testicle.

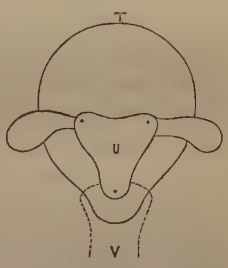
When one of the lobes of the tumour is of unequal volume, as the right for example, which often happens, we find in the region behind the uterus, which is pushed to the left and slightly twisted, an almost circular tumour rising more or less high in the abdominal cavity. Fig. 2, T. At the lower part of this tumour there is a sort of undefined projection lying behind the Fallopian ligament, which appears to be formed by the swollen broad ligament, above this rises the tumour which, in the case represented by Fig. 1, was interposed between the two lateral lobes.

Fig. 2.



In Fig. 3, T, this third middle lobe, being much more developed in comparison with the other two, stretches upwards in the middle line sometimes as high as the umbilicus and pushes the uterus and the two swollen broad ligaments against the pubis. This last conformation is much less frequent when the effusion of blood results from defective excretion, than when it occurs simply as a hæmorrhage from one of the generative organs into the peritoneal cavity. It is, indeed, peculiar to this menorrhagic variety of hæmatocele, which, as I shall show in a succeeding chapter, is the commonest of all.

Fig. 3.



When the upper part of the blood cyst projects into the abdominal cavity and there forms such a tumour as I have just sketched, its lower portion projects in front into the vagina and behind into the rectum where its characters may usually be made out. Sometimes the vagina is so distorted by it that the cervix is reached only with difficulty, being pushed about according to the amount and position of the effusion, whether it be median or lateral. In some exceptional cases the cervix, as in Case I., is lower than usual, in others it is higher, and is pushed forwards against the pubis. Sometimes the tumour is so low down that the finger must be curved to reach the cervix, in order to discover its relative position and the direction of its cavity, all which is indispensable for interpreting the results of the vaginal examination. When the tumour is median, we find the cer-

vix flattened against the pubis and drawn up; when it is latero-median the cervix, besides being pushed forwards and upwards, is laterally depressed from that side which is occupied by the tumour, and is thus slightly twisted on its axis with a lateral inclination. These differences do not prevent the cervix from receiving directly movements which are exerted on it by pressure on the fundus; but pressure on the tumour, when it projects into the abdominal cavity, is not communicated to the cervix.

Carrying the finger behind the uterus, we find the latter separated from the tumour by a sulcus, the tumour itself sometimes descending below the uterus into the recto-vaginal pouch as far as the junction of the upper and middle third of the posterior wall of the vagina, sometimes even a little below that. In the latter case it will be felt as a boss, about the size and shape of an egg, easily appreciable both to sight and touch, to the former either by the speculum or by merely separating the labiæ with the fingers. Visual inspection, however, is of little service and may well be dispensed with. The bulk of the vaginal portion of the tumour may readily be made out by combining vaginal and rectal examination, while at the same time the latter demonstrates the deformities of that part, which besides being flattened from before backwards by pressure of the tumour is sometimes thrown a little to one or other side. Furthermore, we are able to make out that above the cervix the tumour expands so as to be bound only by its containing bony walls, and is incapable therefore of definition in this direction. This defect in delineating the form and size of the tumour, which seems, as it were, like molten metal to take the mould in which it is cast, is very important in the differential diagnosis of hæmatocele from other benign or malignant affections of the uterus or its appendages.

The physical signs described above, which establish not only the existence but the seat, volume, and configuration of the tumour, are much less important than those which indicate that it contains a fluid, and that it is formed by an intra-peritoneal effusion of blood. To determine these points we must again and again combine abdominal palpation with vaginal examination, for mere vaginal examination as recommended by Nelaton* is very untrustworthy, and can only give evidence to those who have a very keen appreciation of the sense of touch. The settlement of this question is at all times difficult, for

* Fenerly, *Thèse inaugurale*, 1855, p. 13.

though we may be able to detect a sort of elastic softness, and to recognise the kind of vibratory sensation communicated to the finger in the vagina by percussing the tumour in the abdomen, yet this does not determine the question as to whether the collection of fluid is blood, pus, or serum. In the absence of perfectly circumstantial antecedents, more important even for diagnosis than digital examination, there is no one, I believe, who is not, or who may not be at times, deceived in difficult cases. It has happened to me as it has to others; but before recounting my own errors in diagnosis I shall relate a most instructive case where a mistake of this kind was made by M. Nelaton. I extract it from the thesis of his pupil, M. Voisin.*

CASE XXXVII.—*Suppurative pelvi-peritonitis mistaken for a retro-uterine hæmatocele; puncture; cure.*

M., aged 39, admitted March 5th, 1857, under the care of M. Nelaton. For the last two months menstruation had been scanty, and for eight days she had had severe pains in the abdomen, which she called colic; warm baths gave her no relief. On examination an abdominal tumour was discovered, which was diagnosed as either retro-uterine hæmatocele or peri-uterine phlegmon. The cervix was displaced, the uterus being pushed against the pubis. On each side there was nothing remarkable, but, behind, a swelling existed between the vagina and rectum; it resembled in consistence a bloody tumour, and was moderately soft and tender. To the left of the hypogastrium, a tumour was felt. In the centre the fundus uteri was detected pushed high upwards and forwards. M. Nelaton diagnosed it as a case of retro-uterine hæmatocele. On the 13th the patient was worse, the uterus was more displaced upwards and forwards; micturition difficult; the vaginal mucous membrane was of a bluish colour at the point corresponding to the swelling. On the 16th the pains were so severe, and the tumour so largely increased, that M. Nelaton punctured the upper and back part of the vagina and let out a quantity of pus. The patient subsequently made a rapid recovery.

In reference to this case I will only add one remark, which is this, that the history of this patient was too incomplete to form the differential diagnosis on which M. Nelaton ventured, and which had no foundation as far as can be judged from the report of the case. I

* A. Voisin, *Thèse inaugurale*, 1858, p. 52.

have selected it from many others of the same nature in order to show that the surgical examination of the tumour cannot suffice to exclude error, however able they may be to form a diagnosis who content themselves merely with the physical signs presented to them. There is a special liability to error when we find that, in the several examinations to which we should submit a patient before coming to any positive opinion, the differences in the tumour are not well marked.

One of the most important characters of bloody tumours in general, and hæmatocele especially, is the successive modifications which they undergo, and the different sensations detected in consequence, especially in their earlier career. Almost immediately after its formation, a hæmatocele is both larger in size and more distinctly fluctuating than at any subsequent period. In a few days it becomes somewhat less bulky, and has a sort of gummy consistence; later still we find fluctuation in some parts, and hard nodules in others; showing, as was apparent in the *post-mortem* examination of my first case, that the separation of the clot into two distinct parts, the one solid, the other serous, has taken place.

But it is not ordinarily in the first month of retention that the separation of the blood into its two parts takes place. As a general rule the tumour remains gummy up to the return of the next menstrual epoch, when it undergoes certain modifications according as the retention ceases or not. Whatever may be the future progress of the case, menstruation invariably leads to an accession of pain in the tumour, and to an increase in its size and tension. This period it is important to note as the starting-point of changes, the character of which will be determined by the mode in which menstruation is performed; if it be easy, there will be a general abatement of the symptoms, owing chiefly to the rapid absorption of the fluid. We cannot, however, reckon on the return of convalescence till at least another month has passed, during which the patient should maintain the recumbent posture; the tumour meanwhile diminishes in size from above downwards, and acquires a firmer consistence.

If, on the other hand, the catamenial excretion is prevented, the tumour, instead of diminishing, increases, it may be but slightly, if there be no additional effusion into the peritoneum; or it may be considerable and accompanied by a renewal of the acute symptoms. As an example I may adduce the following case:—

CASE XXXVIII.—*Sudden suppression of menses; repetition of the symptoms two years after; diagnosis of hæmatocele three months after admission into the Hospital; three months and a-half after that a repetition of the pelvic hæmorrhage into the peritoneal cavity; spontaneous escape of the blood* per vaginam *and* per rectum; *cure.**

A woman, aged 43, began to menstruate at 13, was married at 22, and had fifteen children. In 1849 symptoms of menstrual retention came on. In 1851 she was admitted into St. Louis for the same symptoms, when a tumour was discovered in the abdomen, and since then she has not been well, but has had no miscarriages. In October 1853 she had severe pain in the left iliac fossa, and deep in the pelvis, attended with swelling, tenderness on pressure, &c. On admission, January 2nd, 1854, there was great pain, tenderness and swelling over the left iliac fossa and down the left side of the pelvis and vagina. Across the abdomen fluctuation was felt, but not very distinctly. The uterus was prolapsed and pushed forwards and to the right. Fluctuation was distinct in the upper part of the vagina in the posterior *cul-de-sac*, and a little to the left of the cervix. The tumour could be felt distinctly fluctuating between the vagina and rectum. On January 17th smart hæmorrhage occurred from the vagina, which lasted eight days, and considerably reduced the size of the tumour. By the middle of February she had greatly improved. On April 15th she was taken with violent rigors followed by fever; for which twenty leeches were ordered. On the 16th there was great pain and vomiting, and the tumour greatly increased in size. On the 22nd another attack of hæmorrhage *per vaginam* occurred with great diminution in the size of the tumour and a cessation of the severer symptoms. On the 30th diarrhœa came on, with bloody evacuations, and a still further diminution in the size of the tumour. From that time she made a good recovery.

I will only remark in reference to this case that the absence of sufficiently circumstantial antecedents forbids any positive diagnosis of menstrual retention, though the history presents many analogies to the first case of that kind recorded in these pages. In both we see a woman who has had many pregnancies, and who seems previously to

* Fenerly, *Thèse inaugurale*, Paris, 1855, p. 53.

have suffered from hæmatocele in connection with her menstrual troubles. At the end of those troubles, which unfortunately we had not the opportunity of observing, another attack of intra-peritoneal hæmorrhage occurred, for which the patient entered the Hospital some time after. As in the first case the symptoms diminished and the bloody tumour lessened after the expulsion of clots of altered blood from the vagina, which evidently came from the uterine cavity, and, as the history showed, the expulsion corresponded exactly with the menstrual period. Just as in Case I. this escape of altered coagula, followed by a long-continued discharge of blood, led to a deceptive kind of convalescence, inasmuch as at the following catamenial period there was an absence of any menstrual excretion.

Then, all at once, as in my first case, at a date exactly corresponding to that when, sixty days before, the expulsion of clots took place in lieu of the ordinary menstruation, the bloody tumour suddenly increased in size and was accompanied by peritonitis.

These cases of hæmorrhagic peritonitis from effusion into the abdominal cavity, do not ordinarily occur, as I have said, till some time after the first catamenial migration. If both the secretion itself and also the molimen which precedes it, are wanting, the catamenial epoch is unattended by any symptoms until the time when the return of the function occasions such an excitement in the tumour as is proportionate to the difficulty of excretion. On the other hand, when the secretion is scanty, the case may lapse into a chronic form, the tumour loses its sensibility, its volume diminishes, absorption proceeds gradually, and general improvement takes place up to the next catamenial period, when similar symptoms are reproduced, and become more marked each time. An example of this chronic form is seen in the following case of M. Velpeau.

CASE XXXIX.*—*Difficult menstruation; symptoms resulting for eighteen months; intra-pelvic blood tumour diagnosed before puncturing; iodine injection; cure.*

A lady, married two years, was never quite regular after her marriage. Abdominal pains began soon after, she lost health, and for one year and a half was under various plans of treatment, when she came under my care, and I diagnosed a collection of fluid in the

* Velpeau, *Recherches anatomiques, etc. sur les cavités closes* (*Annales de la chirurgie française et étrangère*), Paris, 1843, t. vii. p. 430.

pelvis behind the uterus, and in the right iliac fossa. This I punctured, and afterwards injected with iodine. She ultimately made a capital recovery.

In spite of the many gaps presented in the history of this case, I have, nevertheless, reported it, because the details which it contains demonstrate the length of time during which the case was in progress, a fact of rare occurrence in the history of hæmatocele. And, moreover, the date of the publication of this case, immediately after that of the memoir of M. H. Bourdon,* proves incontestably that Professor Velpeau,† long before the pretended discovery of hæmatocele in 1849,‡ had made out, during life, the diagnosis of intra-pelvic blood tumours, and had formulated the treatment which appeared to him the most opportune under the circumstances.

It is seldom that these tumours remain thus stationary; the excitement of the return of menstruation generally gives rise to inflammation, which, if it be not excessive, leads to a slight ulceration of the inferior wall of the tumour, and thus occasions the escape of the contained blood. This may take place either by the rectum and vagina simultaneously, as in Cases XXXVI. and XXXVIII., or by the rectum or vagina singly, as in the following case, which is further remarkable, inasmuch as the opening in the tumour appears to have been produced simply by the irritation caused by the presence of the blood acting as a foreign body.

Case XL.§—*Menstrual suppression; symptoms increasing in severity for four months; admission into the Hospital sixteen months after; diagnosis of hæmatocele; spontaneous opening of the tumour three months after* per vaginam; *rapid diminution of the tumour; cure.*

L., aged 28, began to menstruate at 15, was pregnant at 18. In August, 1853, menstruation ceased, without giving rise to any abdominal pain, and since then to the present time, February, 1854, it has not returned. In December last micturition became difficult and defæcation painful; soon after which she had an attack of hæmaturia, which lasted a month; at first

* H. Bourdon, *loc. cit.*, 1841.

† Velpeau, *loc. cit.*, 1843.

‡ Nelaton, *Éléments de pathologie chirurgicale*, t. v. p. 220, Paris, 1859.

§ Fenerly, *Thèse inaugurale*, p. 56, Paris, 1855.

she thought her urine was coloured by menstrual fluid. After this she had increasing pains in the abdomen. On examination, February 8th, 1854, a tumour was felt on the left of the uterus, soft and very tender to the touch, though the uterus was not so. The cervix was pushed back, and in the utero-vaginal *cul-de-sac* a tumour was felt similar in all respects to that in the abdomen. The diagnosis made by M. Nelaton was that of recto-uterine hæmatocele. On May 27th there was a discharge of black fœtid blood *per vaginam*, and it was then discovered that the tumour had burst into the vagina. The discharge continued for some time, and the patient ultimately got well and menstruated regularly.

The spontaneous opening of a bloody tumour, whether into the rectum or vagina, or both, and the expulsion therefrom of the menstrual secretion, either alone, as in the preceding case, or mixed with pus, is generally followed by rapid improvement. Not only does the tumour speedily diminish in size, but if we are content not to enlarge the opening, as in Case XXXVI., the local excitement soon calms down, the whole mischief disappears, and the normal excretion takes place. When this happens the pelvic cyst cicatrizes, and all local inflammation subsides.

It must, however, be added, that occasionally, by mere contiguity, the inflammatory action extends to the rectum, and symptoms resembling those of dysentery come on. They are still more marked when the tumour opens into the bowel; but, at the same time, any one conversant with true dysentery would not be likely to confound the two diseases. Nor can I agree with M. Voisin* in his estimate of the resolvent action which this inflammation exercises upon the hæmatic tumour. As a rule, rupture into the bowel is more likely to occur where the inflammation of the cyst is so severe as to simulate inflammation of the broad ligament. This happened in the following case of M. Satis.†

Case XLI.—*Menstrual suppression followed by peritonitis; return of menstruation and subsequent suppression; development of a tri-lobed hypogastric tumour projecting into the vagina behind the cervix; inflammation of the tumour; expulsion* per rectum *for a*

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* Voisin, *loc. cit.*, p. 37.

† Satis, *Thèse inaugurale*, p. 89, Paris, 1847.

fortnight of clots and purulent matter; circumscribed induration of right broad ligament; disappearance of the rest of the tumour.

J. D., aged 25, began to menstruate at 15; had always been regular, and the discharge somewhat abundant. Two months before admission menstruation was suddenly suppressed, and was followed by severe pain in the abdomen, with swelling in the hypogastrium. She did not quite recover from this; but some weeks after leeches were applied to the thighs to provoke menstruation. This had the desired effect; but again it stopped suddenly, with increased pain, for which she was admitted August 12th, 1845. There was then severe pain in the abdomen, hips, and loins; a swelling existed at the lower part of the body, and in each iliac fossa, rising in the median line to five fingers' width above the pubis, it was smooth but very tender. She was bled to eight ounces, baths and poultices were ordered. On examination the cervix was found to be drawn up, and the body of the uterus so considerably increased in size that it formed a tumour in the middle of the abdomen, it was painful to the touch, and was fixed between the two lateral tumours. These were continuous behind the uterus; no fluctuation could be felt; no discharge *per vaginam*. On the 20th the bowels were relaxed, the motions being mixed with blood and pus. The tumours after this were somewhat smaller and less painful. For twelve days the discharge of pus and blood from the bowel continued; there was none from the vagina. Gradually the tumours disappeared, the pains ceased, and the patient made a good recovery.

The symptoms in this case as regards their severity may be said to hold a middle place between the acute and chronic, the blood expelled presented the usual, and one may say the pathognomonic characters, though its expulsion took place in an abnormal way. The mixture of a large quantity of pus with it showed that the containing cysts had undergone a more than usually severe inflammation.

In this case the inflammation was, as it were, accessory, it ran its course unperceived in the midst of more striking symptoms consequent upon the catamenial retention. On the other hand, in the interesting cases for which we are indebted to M. Satis,* the inflammation was the prominent symptom and so masked the expulsive effort as to attract all attention, and led M. Satis to refer the symptoms

* Satis, *loc. cit.*, p. 83 et suiv; 89 et suiv.

to that alone. M. Satis would have us believe that the mere absence of the catamenial secretion is the cause of all the morbid phenomena, that in fact it is simply a physiological disturbance. But this theory overlooks the fact, that when suppuration takes place blood, both fluid and coagulated, is found in the midst of the pus, as was seen in the discharge which came away for a fortnight in the last case. The presence of these clots negatives M. Satis' opinion, and establishes that which I have sought to explain. In the case just cited, severe symptoms, which may legitimately be referred to an attack of hæmorrhagic peritonitis followed, the first attack of menstrual suppression. The severe pain in the lower part of the body extending soon over the whole of the abdomen, which was increased by pressure or movement, and continued for several weeks, accompanied by a smart attack of fever, and lastly, the shape of the abdominal swelling, all indicated the existence of that affection; especially as the same symptoms were observed in my first case, where the diagnosis was verified by a *post-mortem* examination.

In Case. XLI the patient was still suffering from peritonitis when the first catamenial period came on without producing any important result, owing no doubt to the fact which I have before observed, that the absence of this function when the system is disturbed from any other cause, is productive of no very evil results. Subsequently the inflammatory symptoms improved, and at the second menstrual period a discharge came on after the application of some leeches, this soon stopped again and was followed by an increase of the hypogastric swelling, the middle and larger portion of which was, according to M. Satis, formed by the enlarged fundus uteri, while the lateral tumours occupied the broad ligaments. This distension of the genital cavities, following immediately upon the suppression of the menstrual flow, was accompanied by continual, but occasionally increasing, pain, resembling those expulsive pains noticed in all the preceding cases. These uterine contractions remained powerless, and a new phase of the disease occurred. While the uterus slightly diminished in bulk, the engorgement of the iliac swellings increased, they became hard, tender, painful to the touch, and hot. Soon lancinating pains were felt in the swelling of the left broad ligament, pus and blood passed *per rectum*, and under the influence of this sanguino-purulent discharge, the uterus and swelling of the right broad ligament sensibly diminished in size, while that of the opposite side remained painful, hot, and tender, and continued to be the seat of painful twitchings. For about a

fortnight the discharge continued, and during this time the pains recurred and again diminished with the return of the discharge. Then the suppuration and discharge of coagula ceased, and convalescence was established.

From this time the uterus and right broad ligament returned to their normal condition. Not so the left, which was more acutely inflamed, and remained considerably indurated. The patient left the Hospital, having had no discharge from the vagina, but cured in appearance, though she remained beyond doubt exposed to a repetition of the same occurrences.

Unfortunately we do not always get this happy termination, on the contrary, the patient for a time seems to improve, but relapses into a state of hectic fever, consequent on suppuration, and gradually sinks. This occurs either when the pus cannot find an outlet externally, as in Case XII., or when the rupture of the sanguino-purulent cyst is unaccompanied by any colliquative discharges, as in the following case, the *post-mortem* examination of which I made with my colleague M. Lailler, to whom I am indebted for the unfortunately not very complete account obtained during life.

Case XLII.—*Menstrual suppression of eight months' standing; hectic fever; death. Post-mortem examination; complex pelvic-tumour; composed of* 1. *four cysts formed in the left Fallopian tube, which was obliterated in three parts and filled with bloody detritus;* 2. *a large tri-lobular cyst formed by the broad ligament and the parietal peritoneum and filled with sanious matter and fibrinous masses, communicating on the one hand with the perforated small intestine, on the other, with the rectum, also perforated*; 3. *by two intra-pelvic serous cysts arising from the right atrophied ovary, free below and within, and apparently of old standing.*

Q. F., aged 21, was admitted June 9th, 1847. She had not enjoyed very good health; at the age of 20, she had a violent attack of colic, with distension of the abdomen, nausea, and the formation of a tumour in the right iliac fossa, which had remained for the last fourteen months. She recovered from the acute symptoms, and the swelling decreased somewhat, but pains in the loins and in the iliac fossa continued. In October last she was seized with severe pains in the limbs and body, coincident with the non-appearance of menstruation. Since then there has been amenorrhœa, and for the last two months diarrhœa. She died on the 18th of June. On making a *post-*

mortem examination, there was found to be general peritonitis proceeding from a perforation of the intestine. The vagina and cervix uteri were normal. The uterus was normal in size, but flattened. The uterine orifices of the Fallopian tubes could not be made out, but on the left side four small cysts were seen placed side by side, between the bladder and left border of the uterus; they were evidently formed from the left Fallopian tube which was obliterated in three parts of its length. They contained a thick grumous material, and were lined with mucous membrane. The outermost cyst was in part formed by the ovary. The right side contained a large tri-locular cyst, the locules freely communicating; the middle one was connected with the bowel and with the rectum. These cysts were chiefly formed out of the right broad ligament, and were filled with a sanious fluid, at the bottom of which was a body resembling very much an atrophied ovary. Between these two groups of cysts was a third, situate in the middle line, but having no communication with them; it was composed of two small serous cysts, having the left ovary for a base; the walls were thin and transparent, and the contents nothing but serum.

The circumstances which in Case XII. and in the preceding, led to a fatal termination, may be regarded as quite exceptional. This remark applies equally to the case recorded by M. Bouvyer,* where

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* *Bulletins de la Société anatom. de Paris*, xxx^e^ année, 1855, p. 388 :— *Dysmenorrhœa; menstrual suppression; application of leeches and re-establishment of the flow. The following month renewed suppression; on admission recent hæmatocele; increase of the tumour at the following period; treated homœopathically; slight improvement, followed by colliquative diarrhœa; death. Post-mortem examination; intra-peritoneal blood-cyst attached to the left ovary; ovaries healthy.*

S., aged 25, married, had never been pregnant. Menstruation began with pain; the discharge clotty; for several months she vomited blood before the periods. In September, 1854, these troubles increased, and the pain preceding menstruation was so severe that fifteen leeches were applied to the hypogastrium. This gave great relief. No tumour was discovered in the pelvis. Three weeks after, menstruation again came on with great pain, and she was admitted into the Hospital *Beaujon*. There she remained from September 24th to December 20th. Soon after admission a tumour was discovered, the size of a fist, a little to the right of the hypogastrium. It was difficult to reach the cervix, which was situated above and behind the symphysis pubis. The uterus not much enlarged was immoveable, and in the posterior *cul-de-sac* was a

granular disease of the kidneys occurred in the course of the febrile attack. It is as difficult to understand the significance of this occurrence as is that of disease of the liver which sometimes occurs in the course of suppurative pelvi-peritonitis. Moreover M. Bouvyer's case is interesting, inasmuch as the homœopathic system of treatment was adopted. I may add too, that if the method of treating hæmatoceles by puncture has been unfortunate in its results in a large number of cases, a system of purely expectant treatment, such as homœopathy, cannot be more favourable, inasmuch as it allows the occurrence of a series of symptoms as grave as those to which punc-

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tumour continuous with that in the hypogastrium; it was independent of the uterus, non-fluctuating but resisting, not solid; it was in front of the rectum. A clotty sanguineous discharge was taking place. Treatment consisted of baths, poultices, leeches, and saline purgatives. She was then treated homœopathically by M. Tessier; the fever abated, the tumour rapidly increased in size and became very tender, the pains increased; defæcation became extremely difficult and painful. The tumour rose above the umbilicus, and her condition became alarming; there was fever, vomiting, and hypogastric tenderness. Suddenly, early in December, and without any treatment, the symptoms abated, the tumour diminished in size, the pain also; but the latter soon returned with increased fever; diarrhœa also came on, and she then insisted on leaving the Hospital. Three days after she took two ounces of castor oil, which made her much worse, and she was admitted into *Hôtel Dieu*, January 5th, 1855, in a state of extreme prostration and stupor with intense headache, hot skin, thirst, &c.; diarrhœa frequent, abdomen distended and painful, cough and profuse expectoration.

January 8th.—Somewhat better. A tumour was felt in the hypogastric and umbilical regions, formed of two distinct parts—the larger situate in the middle line, the smaller in the right iliac fossa—hard, resisting, non-fluctuating, dull on percussion; the cervix was directed to the left side. In the posterior *cul-de-sac* a large tumour was felt, which seemed to be intimately connected with the body of the uterus and continuous with the non-fluctuating hypogastric tumours; urine acid, albuminous. She rapidly became more prostrate; diarrhœa and vomiting increased, and she died on the 9th.

Post-mortem examination.—On opening the abdomen, the intestines were seen to be pushed upwards by a large tumour situate in the pelvis and right iliac fossa. It was globular, and measured six and a-half inches in diameter. Its walls were thick and resisting, and its cavity contained clots of black blood; it was situate to the right of the uterus, the interior of which was quite healthy; the ovaries were also healthy. In front of the left ovary was the cyst before-mentioned; the tumour seemed to be intra-peritoneal. Both kidneys were affected with Bright's disease.

ture itself can give rise. Happily, however, there are few physicians who have the sad courage to submit their patients to such medication; and this is why a fatal termination is seldom to be expected, even where the blood cyst becomes the seat of inflammation sufficiently severe to transform it into a purulent cyst. When the cyst has been opened, either spontaneously or artificially, we generally find that for a long time after we get symptoms of diarrhœa, or dysentery, owing to the extension of inflammation to the rectum. After a time this improves, and is succeeded by constipation and colic which continues for some time. The return to health is therefore very gradual and tedious, because though the menstrual retention is perhaps relieved, some mischief in the generative organs remains and disturbs the digestive functions.

Notwithstanding the tediousness of the convalescence, we may still regard the prognosis of hæmorrhagic pelvi-peritonitis as very favourable, at least relatively. Possibly the gravity of these inflammations of the serous membranes depends upon the nature of their exciting cause. Hæmorrhagic peritonitis is undoubtedly less severe than that caused by the effusion of other fluids, because blood is less irritating; and besides, after various transformations it may disappear by absorption from the cavity which it has inflamed, or it may be isolated and form a serous cyst which remains without producing any evil result.

In regard to the prognosis and the results which may follow the organization of these false membranes, I may remark, that they sometimes form bands which unite to the different parts of the parietal peritoneum, sometimes to the uterus, more often to the ovaries, and still more often to the Fallopian tubes. In this way are produced the various displacements of the ovaries and tubes, as well as some uterine deviations, which not only lead to much inconvenience and to sterility, but often to fresh attacks of peritonitis.

Moreover, not only does the peritoneum take on inflammatory action, but the Fallopian tubes also become inflamed by the prolonged detention of blood in their cavities. Phlegmons also of the broad ligaments may result in the same way, at least such appears to have been the result in the following case:—

Case XLIII.*—*Menstrual suppression recurring eight times, and each time followed by a swelling in the iliac fossa—six times in the*

* Satis, *loc. cit.*, p. 83.

left, twice in the right side, attended in each case by a discharge of pus per rectum ; *amenorrhœa ; enlargement of the left broad ligament ; scanty sanguineous discharge from the vulva ; purulent evacuation* per rectum ; *aggravation of symptoms at the following period ; re-opening of the rectal fistula with escape of blood preceding that which took place* per vaginam ; *cure.*

P., aged 22, began to menstruate at 13 ; was regular up to 17 ; was never pregnant. Four years ago, at the commencement of a menstrual period, she had violent pains in the right iliac fossa, with vomiting, swelling of the abdomen, and suppression of menstruation. For all this she was leeched, and recovered. This has recurred eight times, each time either menstruation has not appeared or it has been arrested. At all other times menstruation has been regular. On each occasion the attack ended by the evacuation of a large quantity of pus *per rectum.* Twice the swelling came on the right side, six times on the left. On April the 18th, 1845, the same thing happened, and she was admitted into the Hospital. She was suffering great pain in the abdomen, with tenderness, especially on the left side, where was an ill-defined, hard, resisting, and painful swelling, extending up as high as the umbilicus. The pain was increased by moving the left leg ; there was a good deal of fever. Venesection was ordered to eight ounces, poultices to the abdomen, rest, &c. On examination the uterus was slightly enlarged, was rising above the pubis, and seemed fixed to the tumour in the left iliac fossa. Gradually the acuteness of the symptoms subsided, the swelling and pain diminished. On the 3rd of May diarrhœa came on, and a large quantity of pus passed *per rectum,* which was followed by a sensible diminution of the swelling. On the 7th rigors came on, with incessant abdominal pain, and enlargement of the swelling in the left iliac fossa to its former size. On the 9th the bowels were again relaxed, and some pus passed, the pain and swelling diminishing. On the 13th a large quantity of pus passed by the bowel as the patient was getting out of her bath. On the 15th the pain was renewed in the side, and the swelling, which had almost disappeared, returned. On the 18th the patient passed a very large quantity of blood and pus by the rectum, after which almost all pain ceased ; the swelling also disappeared, and only a hard substance could be felt in its former situation. From this date to the 25th the patient continued to pass a little pus, and she gradually improved in all

other respects. Menstruation came on properly, without any pain, and lasted five days. She was discharged cured on May the 31st.

These cases of inflammation of the broad ligament, to which should be added a certain number of the cases grouped by M. Voisin under the title of Hæmatocele,* have many symptoms in common both with hæmatocele and with that form of pelvi-peritonitis which is caused by the reaction upon the pelvic peritoneum of the distended condition of the generative organs by menstrual retention. Inflammation of the tubes and of the cellular tissue of the broad ligaments and peritoneum covering the uterine appendages, as well as of that of the neighbouring parts, begins generally within a few days of the arrested catamenial period. We first get symptoms of distension of the Fallopian tubes, then those of inflammation of the same parts. This soon extends to the cellular tissue of the broad ligaments, and ultimately to that of the iliac fossæ. The swelling which is caused by the distended tubes, and which may be felt in the iliac fossæ and in the vaginal *cul-de-sac* becomes very tender, hot, and painful. It cannot, however, be exactly circumscribed, partly because of the extreme pain of examination, partly because these phlegmons project so very little into the lateral vaginal *culs-de-sac,* unless the peritonitis causes a great increase in the swelling created by the broad ligament. I have demonstrated this fact many times, especially in phlegmons of the broad ligaments after delivery, which are more easily studied than those of other varieties.

I would especially insist then upon these two facts—First, that in phlegmons of the broad ligaments we get scarcely any evidence of swelling in the vaginal *culs-de-sac* except as a result of acute peritonitis in the neighbouring part; the greater part of the swelling then appreciable being due to the peritonitis. Secondly, that in phlegmons of the broad ligaments the inflammation has a tendency to extend to the cellular tissue of the iliac fossæ. So that, as a result of inflammation of these organs, we either get, an extension of the evil to the cellular tissue covering the iliacus muscle, where the finger cannot reach it, or it spreads to the parietal sub-peritoneal cellular tissue, where its progress may be traced day by day. It is important to remember these two facts, as they are valuable in reference to the diagnosis of these affections which at the commencement is often

* Voisin, *Thèse* citée.

very obscure. At this period, pressure, nay even simple contact, is borne with great difficulty, because there is not only the pain of the original inflammation, but that also of the subcutaneous phlegmon; and soon after, instead of being limited, it radiates to the neighbouring parts, especially to the peritoneum, all of which take on the inflammatory action.

After a time the abdominal walls become very sensitive and retracted; formication creeps over the thighs; micturition is frequent and painful; defæcation is very painful, sometimes impossible; and lastly, the intestines become tympanitic. At the same time there is a good deal of constitutional disturbance, malaise, loss of appetite, thirst, altered expression, frequent and full pulse, hot and moist skin. These last symptoms vary in severity according to the degree of inflammation.

If the uterus succeeds in terminating the retention, all the symptoms gradually disappear. But if, on the contrary, it fails, the inflammation runs its course, and pus is formed in the broad ligament; examination of the iliac fossa and *per vaginam*, singly or combined, demonstrates the existence of fluctuation which may sometimes also be felt *per rectum*.

During the stage of suppuration the morbid sensibility and retraction of the abdominal walls subside, and all the other symptoms diminish; and though the patient feels better, there is yet an indescribable feeling of malaise and a general want of power, the face becomes pale, the pulse loses its frequency and force, but still there is a febrile condition which alternates with chills in the evening. This state of things continues until either a free incision is made into the fluctuating part of the vaginal *cul-de-sac*, or else nature spontaneously opens the abscess.

Whether or no the matter should be let out by the various ways in which iliac abscesses are treated I will not venture to decide; but it certainly appears desirable, considering the relation of the lower part of the swelling to the vagina on the one hand, and to the rectum on the other, that we should, as a rule, open the abscess in one or other of those situations.

But when the affection terminates happily and does not lead to any of those accidents which were pointed out in Case XLII., as soon as the suppuration ceases the fever passes off and convalescence is speedily established. Health is permanent or otherwise according as the treatment directed against the condition of the cervix uteri, which

was the cause of all the disturbance, has been successful or the reverse. If the former, at the succeeding menstrual period the discharge flows in its normal way; but there is always the fear lest under the influence of slight causes the same condition may recur. It is therefore to that which is the cause of obstruction that all our attention should be directed. Hence the importance of making a careful and accurate diagnosis of that upon which the retention depends.

CHAPTER III.

DIAGNOSIS.

Of the various conditions, physiological or morbid, which may be confounded with menstrual retention, some present symptoms analogous to those of the first, and others those of the last stage of the disorder. Hence in discussing the differential diagnosis of this affection, a division of the subject seems forced upon us, which, I admit, may not be wholly recognisable at the bedside.

I. The first stage, characterised principally by the absence of the catamenial flow, and the signs of repletion of the generative organs, with a consequent effort to expel the secreted product, should be distinguished from other physiological or morbid conditions attended by congestion and painful menstruation. We may at once eliminate from the diagnosis all those cases of amenorrhœa which are unattended by any special symptom, or by only slight local or general symptoms. This elimination does not, however, obviate all difficulty in diagnosis; one source of difficulty lies in the circumspection which the physician must exercise in his inquiries, and the extreme reserve required in order to avoid any direct examination until we are satisfied as to its obvious necessity in order to determine whether there exists any malformation of the generative organs which opposes menstrual excretion. Unfortunately this reserve may be and is sometimes attended with evil results by delaying operative proceedings until their danger is evidently increased. The symptoms upon which we should rely are, the regular periodical monthly return of expulsive pains, in a girl in whom are other symptoms of puberty; the increasing intensity of the pain, which passes off to some extent, and leaves behind a morbid sensitiveness over the lower part of the abdomen, where after each attack some slight swelling remains.

When these symptoms are well-marked, a digital examination is absolutely necessary in order to decide whether they depend upon menstrual retention or pelvi-peritonitis, an affection which under these circumstances may occur, as appears from the following case, which my friend M. Goupil and I observed together.

Case XLIV.—*Menstruation commencing with severe abdominal pain and vomiting at the thirteenth year; subsequent menstruation irregular, and attended by the same symptoms; at seventeen pelvic peritonitis from the same cause; no imperforation or contraction of the vulvo-uterine canal; retro-uterine swelling; rapid recovery, though menstruation never came on.*

M. C., aged 18, was admitted into *Hôtel Dieu* November 7, 1859. She enjoyed good health until she was 13 years old, when she was seized with abdominal pains, rigors, and vomiting. These symptoms recurred at intervals of eight, fifteen, or twenty-eight days, and lasted one or two days. They were unattended by any sanguineous discharge. Eight days after the last menstrual period she was suddenly seized with violent abdominal pain and distension, bilious vomiting, and rigors. On admission she complained of extreme pain in the lower part of the abdomen, which was slightly distended, and a rounded tumour was vaguely felt above the pubis; but the slightest pressure over the hypogastrium, or in either fossa, was so painful that it was impossible to define the swelling. An expectant plan of treatment was followed with opiate poultices; the pulse ranged from 110 to 120. On examination the external genitals exhibited no malformation, the hymen was intact, the vagina and uterus small, the latter being anteflexed. In the posterior vaginal *cul-de-sac*, on the left side, and slightly on the right, a tumour was felt; it was tender, elastic, but non-fluctuating. As the tenderness subsided external examination showed that a tumour extended three fingers' breadth above the pubis; its summit was ill defined; inferiorly it was felt to be continuous with the tumour in the vagina. The sound passed easily into the uterus for about an inch. By rest in bed, warm fomentations, opiates, and poultices, she gradually recovered, but menstruation did not appear while she was under our observation.

It is clear that two distinct affections coexisted in this case, pelvi-peritonitis, which was the cause of her admission into the Hospital,

was easily diagnosed; and an obscure condition, due no doubt to the transformation produced in the genital organs by the accession of puberty, and which probably by contiguity induced the inflammation of the pelvic serous membrane. What the exact nature of that condition was we could not with certainty determine; it was not hæmatocele; possibly it may have been due to tubercles either of the ovary or Fallopian tubes. I believe, however, that the phenomena were the result of a flux, either of the ovary or of the tubes, dependent on an aborted ovulation. This morbid ovulation will sometimes give rise to inflammation either of the tube or ovary, and subsequently to peritonitis, just as orchitis and mammitis will occasionally occur in boys at the period of puberty.

All this, however, is mere supposition, neither M. Goupil nor I were able to make a diagnosis; still the absence of any real expulsive pains may lead us, even before any direct examination, to eliminate all idea of malformation of the vulvo-uterine canal.

In combining, as we did in this case, abdominal palpation with vaginal examination, and examining both with the finger, the speculum, and the catheter, we easily recognise any congenital imperforation or constriction of the vulvo-uterine canal. But it is evident that patients suffering from obstructions of this kind wait far too long before seeking advice, as is apparent in many of the cases of enormous distension which I have recorded. Where the obliteration exists at the orifice of the tubes, as in Case XXXI., or in one of the tubes of a bihorned uterus, as in Case VIII., it is different. Under these circumstances the character of the pains, their monthly return, and the steady increase of the tumour or tumours situate on the sides of the uterus, may give rise to the suspicion that some such malformation exists, and is the cause of the dysmenorrhœic pains, though it does not admit of our making any certain diagnosis. Happily, such cases are quite exceptional, and we need scarcely, therefore, take them into account in ordinary practice, where even the more common congenital imperforations are but seldom met with.

The signs by which congenital imperforations are recognised serve equally to establish the diagnosis of obliterations or contractions occurring after puberty, and they are generally more easily recognised because the urgency of the symptoms justify an immediate resort to direct examination, the danger from suppression being greater and more imminent in these cases than in those where the function has

not yet been established. When after parturition, disease, or operation, violent dysmenorrhœic pains come on without any menstrual discharge, as in Cases X., XI., XII., and XIII., where partial or complete obliteration of the generative tract existed, we ought at once to institute a vaginal examination. This will speedily remove all doubt, except in those rare cases (*Vide* Case XXXII.) of obliteration of the Fallopian tubes, a condition which at present we have no means of diagnosing. It must, however, be borne in mind that all cases of menstrual retention are not necessarily due to obliteration or contraction of the vulvo-uterine canal, it may occur from quite another cause, as in the case of M. Duges,* where it came on two months after labour. This case demonstrates that the absence of the signs of partial or complete obliteration of the vulvo-uterine canal cannot weaken the diagnosis of menstrual retention occurring soon after delivery, when that is indicated by the signs which I have already detailed at length in the chapter on Symptomatology.

A much more important and difficult diagnosis is that between the early periods of menstrual retention and commencing pregnancy, where, as sometimes happens, intense uterine congestion and severe pain occur at the first period after conception. We cannot of course trust much to the statements made by patients themselves. In single women, not the most positive denial nor even the existence of the hymen, will justify the absolute dismissal of all idea of pregnancy. We must examine and compare the local signs, and even these are sometimes not free from uncertainty, as for instance, where the doubt is between an early period of menstrual retention and the congestion of the cervix in the early weeks of a first pregnancy. In the latter, however, the cervix is more open, its development more regular, the enlargement of its lower lip more considerable, the arteries more throbbing, and the temperature higher than in the former case. Moreover, there is an elasticity and a peculiar softness of the gravid uterus, which is perhaps one of the best signs of early pregnancy, and often at this epoch visual examination reveals a slight violet tint of the cervix, which becomes more marked at a later period. Lastly, the uterine contractions are less marked in early pregnancy, and they have not that special dysmenorrhœic character.

In catamenial retention we get dysmenorrhœic pains, malaise, some

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* Boivin et Dugès, *Maladies de l'uterus et de ses annexes*, Paris, 1833, t. ii. p. 407.

nervous phenomena and general disturbance, all which are wanting in early pregnancy. In pregnancy what symptoms there are diminish as time advances, while the reverse obtains in menstrual retention, and as each goes on the symptoms of each become more unmistakable and more unlike.

It is necessary to insist on the difficulties of this diagnosis, because it will suggest what is very desirable, a temporising policy until the real condition is clearly established. I have known cases of hæmatocele which have been mistaken for retroversion of the gravid uterus. One of these occurred so early as 1812, the other in 1854, and as the latter was followed by a *post-mortem* examination, there was, unfortunately, no room for doubt as to the mistake which occurred. I extract it from the thesis of M. Voisin.*

Case XLV.—*Difficult menstruation; dysmenorrhœic pains recurring regularly every month from the age of* 15 *to* 21, *when the first menstrual flow took place; suppression of menses, and, five weeks after, distension of the abdomen, with severe colic; enlargement of the uterus and retro-uterine tumefaction, leading to the following diagnosis—retroversion of the gravid uterus at the fifth month; puncture; death. Post-mortem examination; intra-pelvic blood tumour; peritonitis.*

A woman, age 32, began to menstruate at 21, after six years of monthly periodical pain; menstruation was always difficult. On admission there was difficult micturition, and painful defæcation. A tumour was felt behind the bladder, round, tender, and fixed, rising half way up to the umbilicus; *per vaginam* fluctuation could be felt. The cervix was drawn up; no movement could be felt in the tumour, no placental bruit nor fœtal pulse was heard. The diagnosis was *retroversion of the gravid uterus at the fifth month.* There was obstinate constipation, vomiting and pain; the tumour was punctured by a trocar, and about two quarts of black fluid blood flowed. Peritonitis set in two days after, and she died in three days. On *post-mortem* examination, the uterus was found dilated, an enormous sac formed of false membranes was found between the uterus and rectum, containing upwards of a pint of blood. There was also intense peritonitis.

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* *Thèse inaugurale*, de M. A. Voisin, Paris, 1858, p. 59.

The following case is from the thesis of M. Viguès* :—

Case XLVI.†—*Menstrual suppression of six weeks' duration; menorrhagia for six weeks, for which she was admitted into the Hospital, when the diagnosis of retroversion of the gravid uterus was made; fruitless efforts at reduction; puncture of the retro-uterine tumour by the vagina, when about a pint of bloody fluid escaped; cure three months afterwards, when menstruation became quite regular.*

A woman, aged 23, had suffered from suppression for six months, and thought herself pregnant. After a debauch she had an attack of menorrhagia, which lasted for six weeks, with a good deal of pain, weight, &c. On examination *per vaginam* a tumour was felt pressing on the rectum behind, and on the bladder in front. The diagnosis was retroversion, and as it could not be replaced it was punctured with a trocar, and a pint of fluid blood escaped.

I need make no comment on these two cases, which, though they were published forty years apart, and in different languages, are nevertheless so similar that they might be thought to be drawn one from the other. They show that though seen by skilful observers, the same error in diagnosis was made by both, though it might have been easily avoided. The characters of the tumour in pelvic hæmatocele are so well marked that in the present day, at least, it seems almost impossible that it could be mistaken for a gravid uterus of five months. Moreover, in the first case menstruation had only ceased two months, and there was really no sign of pregnancy.

Practically one of the greatest difficulties in diagnosis is the distinguishing menstrual retention from a morbid condition of the ovary or Fallopian tube, which arises when any accidental circumstance, instead of merely disturbing menstrual excretion, interferes with the secretion itself, and causes a sort of feminine orchitis. The difficulty here lies in the fact that in both these affections the symptoms occur at the time of the menstrual epoch, that the same causes may produce both, that in both the sanguineous discharge is

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* Viguès, *Thèse inaugurale*, Paris, 1850, p. 36.

† Jourel, *Médicin à Rouen, Bulletins de la Faculté de medecine de Paris*, No. 8, 1812.

wanting, and that many of the symptoms are common to both affections, whether the condition of the oviduct be such as to produce a great reaction on the peritoneum, or whether, on the contrary, this be so slight as to be scarcely appreciable.

In the former case the pelvi-peritonitis may be sufficiently severe to mask the symptoms of the ovarian, or rather the tubar disease, and soon gives rise to a swelling which, as in Case XXXVII., may resemble hæmatocele and even be mistaken for it by very competent authorities. The difficulty of this question is so great that it requires a very complete knowledge of pelvi-peritonitis, I shall therefore reserve its consideration till I treat of the latter subject. I ought, however, to point out the difficulty of distinguishing between the first stage of retention, and this morbid condition of the ovary or oviduct with suppression of the catamenial secretion, which causes but a very slight reaction on the pelvic peritoneum. The following is a case in point:—

Case XLVII.*—*Menstruation regular till the age of* 22; *then suppression of menses on the second day from cold; recurrence of the suspension for four months; affection of the left broad ligament; cure.*

C. P., aged 22, was admitted into *la Pitié*, July 9th, 1859. Menstruation began easily, without pain, at 11½, and continued regular afterwards; rather abundantly, but without clots; generally preceded for a few days with lumbar pains, and followed for a few hours by a white discharge. After puberty was established till last year she had been subject to nervous affections, which she described as hysterical. It could not be ascertained whether or not their cessation was coincident with marriage. Menstruation was unaffected by it, but about a year after she had an attack of hæmorrhage, which she did not think was due to abortion, because it occurred three weeks after menstruation; the clots, however, were not examined for any product of conception. She menstruated again a month after, and continued regular till last April, when it stopped suddenly on the second day from a chill, the patient having washed in cold water. She did not suffer much at that time, and the following month menstruation came on without pain, and was abundant the first day. The second day it again stopped

* Recorded by M. Brouardel.

suddenly and from the same cause; still it produced no evil effects. In June it came on again abundantly the first day, and again stopped on the second day as before; no mischief appeared to result; but twice during that month she had a sanguineous discharge for half a day. Notwithstanding all this menstruation came on on July 2nd normally. On the 3rd she repeated her former folly, and again the flow was arrested. On the 4th she took a long walk, after which she experienced acute pain in the lower part of the body, which was increased by walking, so as to cause very marked lameness in the left leg. The pains continued to increase up to the 8th, when she was obliged to take to her bed, and apply poultices over the abdomen. This gave relief, but on the 8th she had sexual intercourse, which was very painful, and was followed by acute pain in the left side, which lasted some hours, after which it gradually subsided to its former condition.

On admission, July 9th, she was very pale, and there was a basic cardiac murmur. She complained of severe pain over the whole lower part of the body, which was aggravated on pressure, but by a few days' perfect rest this subsided into a feeling of mere heaviness in the pelvic region and left side. No swelling could anywhere be discovered, but there was extreme pain on pressure in the left iliac region. The vagina was hot, moist; the cervix regular, and carried backwards; no ulceration, no flexion, but the uterus was slightly twisted on its axis, so that the anterior surface looked forwards, and to the right; movement of the organ was possible, but gave great pain, especially in the left iliac fossa. The anterior *cul-de-sac* presented a sort of band, which was very painful to the touch. In the left *cul-de-sac* there was felt a sort of boggy, œdematous swelling not definable, but very tender. The posterior *cul-de-sac* was lessened by the cervix being pushed back, but it was otherwise free, and not tender on pressure. The same applies to the right *cul-de-sac*. Micturition was easy; constipation; loss of appetite; no nausea or vomiting. Ordered emollient injections, poultices, baths, lavements. On the 11th she was much the same; the bowels had acted, but with pain; ordered four leeches to the cervix, followed by a bath. These gave great relief. On the 13th and 14th she was much relieved by the escape of a few drops of blood, resembling that at the close of her periods. On the 18th she was so much better that it was difficult to keep her in bed. Pressure in the left iliac fossa was much less painful. Both the cervix and uterus

were manifestly smaller than before. The slight rotation of the uterus had disappeared, the cervix not too far back; still the left *cul-de-sac* was not so free as the right, but the œdematous feel had disappeared; ordered quinine wine four ounces. On the 20th she left the Hospital, feeling quite well.

Between the two before-mentioned affections, viz., the early stage of menstrual retention and this ill-defined tubo-ovarian affection, there are differences as regards the character of the pain, the information obtained by digital examination, and the termination of the two diseases; although in their course they so far resemble one another that a correct opinion is perhaps obtained only when it is of doubtful utility to the patient. In the case of menstrual retention the pain comes on immediately on the arrest of the discharge, together with a good deal of intra-pelvic weight and pain of an expulsive character, not unlike that of labour. In tubo-ovaritis, on the contrary, a certain time elapses between the disturbance of the secretion and the beginning of the pain, which latter resembles, as far as we can judge from the description given by intelligent patients, that which exists at the commencement of orchitis. In tubo-ovaritis, the pain is more limited than it is in menstrual retention; it is localized in the subpubic region, and in one of the iliac fossæ, where it is most severely felt. At first the pain resembles that of the commencement of orchitis; then it assumes a peritoneal character, and is increased by abdominal or vaginal pressure, but these examinations do not excite any expulsive pain, such as characterise uterine repletion.

We also find on examination that in the anterior part of the vaginal *cul-de-sac*, corresponding to the iliac fossa where the pain exists in greatest intensity, and in the adjoining part, there is a vague ill-defined doughy feel analogous to that of acute œdema, indicating the existence of tumefaction in the broad ligament, and giving a slight postero-lateral displacement to the uterus. The swelling which occurs in the first period of retention is not thus localized. The uterus is increased in volume, is more globular, and presents a kind of contractile erection, which becomes very marked when, under the influence of digital examination, expulsive pains are excited.

It must be remarked, however, that these symptoms, the most important of which is the pain, do not admit of any certain diagnosis, at least during the first few days, but happily the therapeutical indications are very much the same in the two affections; what we

have to fear is the occurrence of pelvi-peritonitis by contiguity of structure. When this happens the symptoms for a time mask those of the primary affection, and the diagnosis is further obscured till after the subsidence of the peritonitis. In the case of menstrual retention coagula, altered by their more or less prolonged detention in the containing cavities, are expelled from the vagina; while in the case of tubo-ovaritis there is no discharge of blood, or, at any rate, none which is accompanied with expulsive pains. The blood, at the same time, not being altered. Of course our opinion must be very much influenced by the circumstantial statement of the patient, and by the order and relation of the symptoms to each other, a knowledge of which is often much more important for diagnosis in affections of the female genital organs than is touch itself, especially when the latter is unassisted by a detailed history of the patient's antecedents.

It is of great importance in the study of the diseases of females to inquire patiently into the relations which exist between different affections, and their dependence on various diathetic conditions. To do this requires that each patient should be submitted to a long and painful interrogation, and that not only present symptoms but antecedent history should be criticised with great care. It is a tedious and painful, but necessary labour, if we would rescue gynecological science from its present vague and unsatisfactory condition.

I shall pass over in silence the differential diagnosis of menstrual retention and congestive amenorrhœa symptomatic of partial chronic metritis, the existence of which I somewhat doubt, because the cases reported by M. Verjus* seem to me to require a different interpretation to that he has accorded them. I do not deny the existence of chronic parenchymatous metritis, which is no doubt the cause of some of the enlargements of the body and cervix uteri; but it is not to that affection that the description of chronic metritis given by M. Gendrin belongs.† I will not, therefore, discuss this, nor will I enter upon those cases of engorgement of inflammatory origin, because these, as a general rule, instead of leading to amenorrhœa, are, on the contrary, accompanied by menorrhagia, and so far as they affect menstruation influence its excretion rather than its secretion.

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* Verjus, *Thèse inaugurale*, Paris, 1844.

† Verjus et Satis, *loc. cit.*

II. The same considerations which induced me to avoid a discussion of the differential diagnosis of partial chronic metritis prompt me also to pass over that of acute parenchymatous metritis, that is to say, uterine phlegmasia, the symptoms of which are precisely the same as those of confirmed menstrual retention. I do not go so far as to doubt the existence of uterine phlegmasia, but I believe that if it exists at all, excepting of course puerperal or traumatic cases, it is so very rare that, like my friend M. Cazeaux,* I do not know of an undoubted case of it. I once thought I saw an example of the kind, the patient presenting all the symptoms described by M. Chomel.†

It is necessary in attempting the differential diagnosis of uterine phlegmasia, that its existence should first of all be put beyond doubt by a number of carefully recorded cases: till then it is but a problematical disease, and all that one can say is that if it exists it is as rare as acute idiopathic gastritis.

The difficulty of diagnosing between menstrual retention and abortion at the second or third month is certainly not slight, if we have to rely on the patient's statements. Still I think that the majority of them, distressed by their expulsive pains, would soon confess their fears as to the existence of pregnancy even though they were silent as to the means resorted to to secure menstruation. In the absence then of reasonable evidence of pregnancy, and failing the mammary signs, we should have a series of probabilities in favour of retention, especially if the symptoms which occurred at the first omitted menstruation were well marked, and if part of them remained after the period, leaving the patient in a state of suffering very unlike that observed in gestation after the first periodical monthly congestion. Besides, the premonitory signs of abortion are unlike those due to distension of the genital organs when a second monthly secretion is added to that which did not escape at the previous period. Not only is the uterine tumefaction increased, but on each side of the uterus the broad ligaments are felt through the lateral vaginal *culs-de-sac* to be turgid and swollen. Moreover, the cervix in retention has not the soft spongy feel of pregnancy. In abortion the expulsive pains are

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* Cazeaux, *Bulletins de l'Académie de médecine*, seance du 28 juin, 1854, t. xix, p. 853.

† Chomel, *Dictionnaire de médecine*, 2e edit., t. xxx. p. 222.

soon followed by hæmorrhage and dilatation of the os; in retention, though the pains are severe, only a drop or two of altered blood escapes. Lastly, in abortion among the recent clots the ovum will soon be discovered, after the passage of which all local symptoms speedily disappear.

Thus then the comparative examination of confirmed menstrual retention and the symptoms of abortion at the second or third month of gestation, shows that the differential diagnosis is not very difficult.

It would seem at first sight that this affection could not be confounded with cancer of the uterus, that there are between these two diseases such differences that an error in diagnosis is impossible. Nevertheless this has taken place, especially where the menstrual retention has led to the passage of blood into the peritoneum, and thereby produced a hæmatocele. I must confess to having made a similar error in diagnosis, and the following quotation is from my memoir of 1848, in which I recorded the fact.* "I believe this error is very easily made, because it is not long since that I committed it, in spite of the facility which I may have for recognising menstrual retention even in cases where it does not exist. Notwithstanding all this, and an examination made as carefully as I am able, I decided for the existence of a uterine cancer contrary to the opinion of my friend and colleague, M. Boucher. But fortunately my diagnosis, which was confirmed by a very eminent surgeon, M. Chassaignac, who was called in consultation with me, was erroneous; some months afterwards the patient left her bed of suffering, and she now enjoys pretty good health."

I am not alone in making this error in diagnosis. M. Nélaton made the same mistake almost immediately after the publication of the memoir in which the above passage occurred, which I know he had seen, for I showed it to him myself. His case is thus related:—†

"In 1849 a pale, anæmic-looking female came under my care at the *Hôpital S. Antoine*. The tumour contained in the pelvis was large and indistinctly fluctuating; the diagnosis was, indeed, doubtful. I believed, however, that there existed an encephaloid tumour, and therefore considering the patient as lost, I was unwilling to at-

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* G. Bernutz, *Arch. gen. de médicine*, 1er fevrier, 1849, 3e série, t. xix. p. 199.

† Nélaton, *Eléments de pathologie chirurgicale*, t. v. p. 710.

tempt anything for the cure. In the same week another patient came under my care, presenting very much the same course of symptoms as the preceding; but meanwhile my attention had been directed to this subject, and I re-considered the previous case: moreover in the last case the patient was younger and the tumour softer and more fluctuating. I therefore decided on making a puncture, believing that should it prove to be an encephaloid tumour no harm would result, while if, on the contrary, it were a cyst or an abscess, it might do good. The result was, that about a wine-glassful of black liquid blood flowed. The patient was greatly relieved, the severe symptoms passed away, her strength returned, and ultimately she got quite well."

In the course of the year 1858 I was present at the *post-mortem* examination of a woman who was admitted in a dying condition at the *Hôpital S. Antoine* under the care of M. Boucher. His assistant, a very distinguished man, diagnosed uterine cancer. On opening the abdomen we found that the tumour, which projected inferiorly into the vagina behind the cervix, and superiorly above the pelvis, forming three bosses, having the form of a hæmatocele, was a cyst filled with green creamy pus, the peritoneal walls of which were of fibrous consistence.

This case proves that even now, in the absence of any antecedent history, which in the present instance could not be obtained, and where there is no opportunity for frequent examinations to determine whether the tumour is in or only near the uterus, an error in diagnosis may occur, especially where there is not also great accuracy of touch. An error of this kind may occur at three different periods; 1. either at the first or second menstrual epoch, where this is unattended by any secretion, and has consequently given rise to simple distension of the genital organs; 2. a little later when the distension is greater and has caused a sort of bloody oozing from mere overflowing; 3. when part of the non-excreted fluid regurgitates along the tubes into the abdominal cavity and forms a hæmatocele. I need not dwell upon the first of these, because it very rarely happens that at this period the diagnosis of cancer is made with any precision. I shall merely content myself by reiterating, that cancer of the cervix may, just as any other enlargement of this part, cause contraction of its orifices and so give rise to a difficulty in the excretion, as happened in Case XXII. We must not, however, conclude from the mere frequency of its occurrence in cancer that that malady exists, but

must rest our diagnosis on the antecedent history of the patient, her general condition, and especially on the signs furnished by a careful examination of the pelvic swelling, and of the state of the cervix and fundus uteri.

But temporizing does not always facilitate diagnosis. The difficulty increases rather than diminishes, when, after an accession of pains, part of the retained blood is expelled, and a continuous discharge is kept up. The difficulty is most marked in a woman perhaps of 40 years of age, whose constitution has been undermined by long-continued suffering from functional disturbance, the commencement of whose illness has not been watched, nor the periodical return of expulsive pain been recognised; and lastly, where the increase of the pelvic swelling which preceded the sanguineous discharge has not been observed. If then direct examination fails to reveal with certainty the existence of organic disease, we must patiently study every particular of the patient's history, determine whether or no her pains are expulsive, and make out how the continuous discharge of blood is produced, the existence of which seems at first to exclude the idea of menstrual retention, while its dark colour favours the idea of the putrid discharges being due to an ulcerated cancer of the uterine cavity. The next point to be determined is whether this form of amenorrhœa is due to a benign or a malignant affection, and in the latter case how much of the retention is due to the increased volume of the uterus and its appendages, and how much, on the contrary, to the malignant disease. This is necessary alike for prognosis and treatment.

In the two first cases which I have reported one of the most important elements in the differential diagnosis of menstrual retention, and the affection on which it depends, was the uniformity of the uterine enlargement, and the lateral distension of the tubes. In the case of enlargement resulting from organic disease, the swelling is almost always irregular. In the majority of cases of this kind the swelling at the fundus uteri presents more or less distinct bosses, which may be detected by combining abdominal with vaginal and rectal examinations. This element of diagnosis is, however, wanting when the retention has resulted in the passage of blood along the distended tubes into the abdomen: thus giving rise to a hæmatocele behind the uterus, which adheres to that organ, and forms a more or less bulky tumour projecting into the vagina below and into the abdomen above. It ought, however, to be added, that the existence of this

tumour, instead of increasing the difficulty of diagnosis, tends, on the contrary, to facilitate it. Its formation is generally accompanied by symptoms of acute peritonitis, and its characteristics are in the present day very clearly defined. This distinction rests upon a comparison of the different progress of the two affections, and of the signs furnished by examination; but these points are considered in the chapter on Symptomatology. I need only allude to the existence of the groove which separates the tumour from the cervix uteri; the shape of the base of the tumour, moulded, as it were, to the pelvic cavity; the direct transmission throughout the tumour of pressure exercised upon any part of it, whether in the vagina or abdomen, the non-transmission of such pressure to the cervix uteri; and lastly, what is of great importance, the successive modifications which take place in the consistence of the tumour. *Apropos* of this last sign, I may remark that changes of an opposite character take place in organic growths; that cancer, for instance, gradually loses its first hardness, and presents a sort of spurious fluctuation when the body of the uterus is destroyed by the cancerous product, as in the case reported by Professor Forget,* of Strasbourg, entitled, *Cancer of the Body of the Uterus, mistaken for an Ovarian Cyst.* In spite of all these signs, the diagnosis is not so simple as might be supposed by those who have seen but few cases. It requires, indeed, great aptitude of touch, which is as essential to the diagnosis of uterine affections as auscultation is to pulmonary affections.

III. We have seen that at an advanced period of menstrual retention, when part of the fluid has escaped into the abdominal cavity, many errors of diagnosis have arisen; that the resulting hæmatocele has been mistaken for retroversion of the gravid uterus at the fifth month (Case XLV.); that suppurative pelvi-peritonitis has been taken for hæmatocele (Case XXXVII.), and lastly, that I and others have mistaken a hæmatocele for a cancerous tumour. Nor is this all, we shall have to examine the differential diagnosis of hæmatocele and fibrous tumour; of ovarian cysts and certain purulent cysts of the iliac fossa, one instance of which gave rise to an error of diagnosis such as I could not suppose possible, though the *post-mortem* examination left no doubt on the question. I shall relate this case further on.

It would seem to be more difficult to confound fibrous tumour

* Forget (de Strasbourg), Recherches cliniques sur le cancer utérine (*Gazette médicale de Paris*, 1851, p. 641).

than cancer with hæmatocele. But M. Goupil had a case of hæmatocele, the diagnosis of which was so difficult that it was impossible to distinguish it from fibrous tumour; indeed, this seemed the more probable of the two. I cannot report that case, which would not indeed be complete without the *post-mortem* examination, but I may refer to two well-known cases in which hæmatoceles were taken for fibrous tumours. One of these is by Professor Malgaigne, the other is by Professor Stoltz, of Strasbourg, I have placed them as notes though they are both very important cases.*

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* Case of M. Stoltz, reported by M. Herrgott, Professor at the Strasbourg Faculty (*Thèse* de M. Engelhard, Strasbourg, 1856, No. 364, p. 35):—

Menstrual suppression; occurrence of severe symptoms three months after; in the following month retro-uterine tumour discovered by M. Stoltz, who made the following diagnosis—fibrous tumour in the posterior uterine wall probably enclosing a cyst in its centre; imperfect menstrual excretion;—in the following month evacuation of blood per rectum; *death. Post-mortem examination—peritonitis of old standing; retro-uterine hæmatocele communicating with the rectum in two places; serous cyst above the hæmatocele; purulent collection in the left broad ligament; elongation of the uterus and arrest of the development of right cornu; absence of the corresponding Fallopian tube.*

A. K., aged 38, began to menstruate at 14, and continued regular every three weeks; had her first labour at 17. Her last period was quite normal three months ago, since when menstruation has stopped without apparent cause. Three weeks ago she experienced a good deal of pain in the lower part of the stomach, with constipation. On the 3rd of March she was admitted into the Hospital, and leeches, baths, and castor-oil were administered with some benefit. Eight days after she had retention of urine which required the catheter. *March 24th.*—On examination, the cervix was found pressed against the anterior wall of the vagina; it was hard, not thickened, but elongated. A large resisting swelling existed in the posterior *cul-de-sac*, pressing on the rectum, and pushing the uterus upwards and forwards; by the rectum it felt elastic, and, at one point, as if it contained fluid. The uterine sound passed easily for six inches. By depressing the handle of the instrument the fundus uteri could be felt in the hypogastrium, and at the same time the tumour was felt to move with the uterus. Externally, a hard tumour situated in the left iliac fossa was felt.

The diagnosis arrived at was, fibrous tumour of the posterior wall of the uterus, enclosing probably a cyst in its centre.

April 3rd.—The pain increased; sympathetic vomiting: menstruation more abundant. Above the left groin a small tumour could be felt. *6th.*—More pain, tender on pressure, skin hot, pulse frequent, menstruation

The mistakes to which I have alluded are easily explained by the singular configuration which the complex tumour presents, formed behind by the hæmatocele, in front, by the distended genital organs which fill the pelvic cavity. The apparent irregularity of this swelling seems, when observed for the first time, almost to have forced the conclusion that it was due to fibrous bodies. The diagnosis of fibrous bodies which present this peculiar condition, that they have determined a contiguous peritonitis, is almost as difficult as that of cancer, when the previous history of the case is wanting. In fact the circumstances connected with pelvi-peritonitis from fibrous

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stopped; ordered leeches and poultices. *9th.*—The alarming symptoms disappeared; but by the *17th* they returned, with great tenderness over the abdomen; the tumour could not easily be defined, was less hard, and more to the left side; feverishness, thirst, hot skin, &c.; ordered leeches and poultices. *19th.*—Diarrhœa, the motions passing involuntarily, some blood. *25th.*—Liquid diarrhœa, very fœtid and bloody; abdomen very tender; tongue dry, skin hot, pulse 104. Mucous râles in the chest. From this time the patient gradually became weaker, the cough troublesome, colliquative diarrhœa came on, the abdomen became distended and tender; some ascites. She died May 1st.

Post-mortem examination.—The lungs were both œdematous; the left lower lobes engorged with blood. Sero-purulent fluid with lymph in the abdominal cavity; evidence of more severe peritonitis towards the pelvic region where all the viscera were bound together. On the left side a large cavity was opened, filled with blood-clots, blackish, and mixed with putrid detritus. A thin serous cyst existed between the rectum and sacro-vertebral angle; it was filled with fluid. The cavity before-mentioned was formed below by the retro-uterine *cul-de-sac*; anteriorly, by the uterus and broad ligaments; posteriorly, by the rectum, laterally, by the broad ligaments and ovaries; above, by the intestines and epiploon; behind, the cyst communicated with the rectum. The uterus was healthy but elongated, its right superior angle rounded and truncated; on the right side there was no communication with the Fallopian tube. On the left side, and apparently from the ovary, a quantity of creamy yellow pus escaped.

Obs. de M. Malgaigne, reported by M. Juteau, and published by M. Viguès (*Thèse*, Paris, 1850, p. 21).

Menorrhagia; retro-uterine tumour simulating a fibroid; incision of the neck of the uterus; hæmorrhage; death. Post-mortem examination; purulent peritonitis; in the pelvis, a large blood-cyst interposed between the uterus and its appendages in front and the rectum and sigmoid flexure behind.

M. C., aged 27, admitted into S. Louis Jan. 29th, 1850. She began to menstruate at 14, without any difficulty, the period lasting six or seven

tumours, are precisely the same as those of inflammation of the pelvic serous membrane, caused by the escape of blood into the abdominal cavity. The diagnosis under such circumstances is determined in the same way as that of cancer, by the antecedent history, the order of occurrence of the symptoms, the different progress of the two affections, and lastly, by the signs furnished by the different vaginal examinations, which are rendered necessary in order to form an opinion. I should add, that the question of the age of the patient may lead to error, because, on the one hand, we meet sometimes with enormous fibrous tumours before the age of 30, and, on the other hand, hæmatoceles may occur, as in the two cases just referred to, at an age very near to the mdidle period of life.

A careful examination of the tumour is of the greatest importance; we should endeavour to make out if any part of it be really attached to the uterus, or whether it is merely adjacent to it; whether it presents

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days; both before and after, but not in the intervals of the periods, rather profuse leucorrhœa. Pregnant at 16½, and has had five pregnancies since; the last two years ago; two months after which menstruation began, and has continued regularly ever since. For the last five months she has worked very hard, lifting heavy weights. A month ago, without apparent cause, she had a severe attack of pain in the lower part of the body—twenty leeches and poultices were applied, but she got no relief. She had menstruated eight days before, but a discharge of blood came on, and has since continued constantly, being interrupted only for a few days by a leucorrhœal discharge; three weeks ago the pain increased, defæcation became painful and impossible without assistance, micturition difficult, vomiting, thirst and great weakness; on admission, hypogastric pressure was very painful, the body tender and swollen. The cervix was situate immediately behind and above the symphisis pubis, and to the right; it was healthy, and was contracted by a swelling felt in the utero-rectal *cul-de-sac*, about the size of a billiard ball; it was hard and immoveable—by the rectum it was felt very distinctly, and was thought to give some fluctuation. Defæcation impossible; micturition frequent and painful—ordered poultices and Seidlitz powder.

30*th*.—The bowels have not acted; all remains about the same.

February 1*st*.—It was decided to operate, and for this purpose the cervix was drawn down and divided freely on either side, the finger was then easily introduced, and a body felt within the uterus; hoping to enucleate it another incision was made through the posterior wall, and a considerable quantity of black coagulated blood escaped, not less than two pounds. After this the finger entered a large cavity quite distinct from that of the uterus.

February 3*rd*.—Abdomen painful, pulse small and frequent, thirst and

any irregular bosses of solid matter; whether it is of the same nature throughout, and especially whether there exists in any part of it a sense of fluctuation. This last sign, which was present in the two preceding cases, is the most characteristic of all: because in the case of fibrous tumour, even when the centre has a kind of gelatinous consistence, we do not get that peculiar sensation of fluctuation which we meet with in hæmatocele. It may be thought perhaps that I exaggerate the difficulties of the differential diagnosis of fibrous tumours; but this unfortunately is not the case. The difficulty is indeed so great, that even M. Stoltz once lectured upon a case of hæmatocele, mistaking it all the while for a case of fibrous tumour; the case is referred to by M. Engelhard.* We shall find the same difficulty when we come to speak of the differential characters of fibrous tumours and chronic spurious peri-uterine phlegmons.

The differential diagnosis of recent hæmatocele and encysted dropsy of the ovary or tumours of that organ, is, as a general rule,

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feverishness; from this time she seemed to go back, became weaker, vomited a good deal, and had a dirty, offensive, and sanious discharge of blood and pus. After a warm bath rather profuse hæmorrhage came on. Next day she had erysipelas of the face, and fæcal matter now began to pass *per vaginam*. On the 15th she had more hæmorrhage, pulse small and frequent, 140 to 150. The abdomen very painful, constant vomiting. The erysipelas had disappeared. She died on the 18th.

Post-mortem Examination.—Intestines found to be matted together by false membranes; about six or seven ounces of thick purulent fluid escaped from peritoneal cavity; the small intestine was perforated about twelve inches from the cæcum, and fæcal matter had escaped from it. A large pouch existed between the uterus or vagina and rectum, extending to the left sacro-iliac articulation, it was filled with blood-clots, and lined with fibrine. It communicated directly with the vagina; the lower lip of the cervix uteri, which had been separated from the organ during the operation, remained united to the inferior wall of the vagina, the upper lip, on the contrary, was attached to the uterus. The uterus was otherwise healthy, the appendages also; behind the tumour was the rectum and sigmoid flexure. An injection was thrown into the iliac artery, and it was seen to escape from the surface of that portion of the cervix which had been divided during the operation; at no part of the internal surface of the cyst was the injection seen. The injections which were passed into the ovarian veins and arteries escaped by the incised portion of the cervix, never on the internal surface of the bloody pouch. An injection passed into the aorta was without any result. The uterus, and the other genito-urinary organs as well as the thoracic and abdominal organs, were quite healthy.

* Engelhard, *loc. cit.* p. 39.

comparatively easy, even when the cyst undergoes a spontaneous cure by a process of inflammation, as in the case published by M. Goupil,* where the inflammation of the cyst extends also to the surrounding peritoneum. The diagnosis rests, first upon the difference in the history; secondly, on the evidence afforded by vaginal examination; and thirdly, on the situation of the tumour; for as a general rule, the cyst is placed in the anterior part of one of the lateral *culs-de-sac* pushing the uterus down backwards and to the opposite side to that on which the tumour is developed. It is only in those rare cases where a simple cyst projects behind the cervix and pushes it against the pubis, that any real difficulty can occur. I will not, however, dwell longer on this point, because in these cases the mistake cannot arise with regard to hæmatocele, at least none such has yet been recorded. Unfortunately this is not the case with extra-uterine gestation. Mistakes of this kind, some harmless, others resulting in unfortunate consequences, owing to rapidly fatal ruptures, have been so numerous, that it was not without deep regret that I remarked in my first paper† that pelvic tumours caused by menstrual retention and cases of extra-uterine gestation, would almost inevitably be confounded together. I regret this difficulty of diagnosis the more because, instead of acting as a stimulus to observers, it has led them to group together cases so dissimilar as menstrual retention and pregnancy,‡ upon which they have founded a symptomatology which instead of facilitating diagnosis has only tended to increase its difficulties. I shall not here attempt the differential diagnosis of extra-uterine gestation and hæmatoceles from menstrual retention, for it must necessarily be incomplete. I shall return to this subject in a succeeding chapter, when the varieties of hæmatocele are being considered. I need only remark here, that the recognition of the existence of hæmatocele is, after all, but a small part of the diagnosis, inasmuch as what is required is not only that we should know this, but that we should also discover the seat and nature of the disease which has given rise to the hæmatocele, and which can alone furnish true therapeutical indications.

But to return to the diagnosis of hæmatocele symptomatic of obstructed menstruation. There are many sources of error which might

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* Goupil, *Bulletins de la Société médicale d'observation, decembre*, 1856.

† G. Bernutz, *loc. cit.*, t. xix. p. 197.

‡ Fenerly, *Thèse* citée.—Voisin, *ibid.*

be mentioned—some arising from the peritoneal inflammation produced by the effusion of blood into the abdomen, which in some cases resembles intestinal perforation. In reference to this point I may revert to one of the characteristics of hæmorrhagic pelvi-peritonitis, viz., the immediate formation of a retro-uterine tumour: in general, it is sometimes cognisable from the very first, but observation has shown me that I and others have exaggerated the rapidity of its appearance in all cases. There are no doubt certain conditions which render its development more rapid in hæmorrhagic than in other forms of pelvi-peritonitis. This correction is very necessary, because after I wrote of the diagnostic signs of intra-pelvic effusions of blood, a woman died very suddenly, under the care of my friend M. Aran, having had all the symptoms of intra-abdominal hæmatocele, except that there was no trace on examination of any retro-uterine tumour. On *post-mortem* examination we found nevertheless that the pelvis was entirely filled with an enormous quantity of blood, which, however, was not yet encysted by any peritoneal adhesions. This interesting case, which has been published by M. Siredey* in his inaugural thesis, ought to put us on our guard against coming to a conclusion as to the non-existence of intra-pelvic hæmorrhage as a cause of the existing peritonitis merely from the absence of any retro-uterine tumour at the commencement of the attack.

I have already alluded to the fact that pelvic peritonitis, like inflammation of other parts of this serous membrane, may be accompanied by choleraic symptoms, so analogous to those of cholera itself that a mistake may easily occur, and I shall have to return to this subject in the Part on Pelvi-peritonitis, in order to report a similar mistake made in 1851. This is certainly an exceptional case; it is right, however, to mention it, as a possibility, because in women suffering from hæmatocele who have sunk from colliquative diarrhœa, the same intestinal lesions have been found as in deaths from cholera: this may be seen in Cases XXXI. and XLII.

I recently made another mistake in diagnosis in attempting to form an opinion without sufficient knowledge of the history. The patient was in that case a German, and not able to speak a word of French. I believed this woman was suffering from hæmatocele. After her last period, ten days before I saw her, she had felt an enormous elastic tumour, which filled all the middle and left lateral hypo-

* Siredey, *Thèse inaugurale* (Paris, 1860), Obs. II., p. 98.

gastric lesion, as far up as the umbilicus, pushing the intestines above it and projecting behind the cervix uteri, which it forced against the pubis. At the *post-mortem* examination I found, to my great disappointment, that this tumour, which to the touch had exactly the character of an effusion of blood, was an enormous purulent cyst of the iliac fossa. The following are the particulars of this case, which my colleague M. Becquerel begged me to examine, because though he inclined to the opinion that it was a peri-uterine phlegmon, yet the diagnosis appeared to him so uncertain that he very wisely hesitated in giving an opinion.

Case XLVIII.—*Menstrual suppression occurring on the second day, and followed by acute pain in the abdomen; formation of an elastic tumour, extending from the umbilicus down the vagina to the left and in front of the cervix; obstinate vomiting for three weeks; crural phlebitis; sudden death seven weeks after. Autopsy; generative organs healthy; enormous cyst with fibrous walls developed in the subperitoneal cellular tissue of the iliac and prævertebral fossæ; the vertebræ, psoas muscle, vessels, and nerves, though compressed by the cyst, which contained a large quantity of unhealthy pus; were healthy.*

A German, aged 30, was admitted under the care of M. Becquerel the 24th May, 1849, having been ill for ten days previously. She began to menstruate at 15, and had ever since been regular, never having been pregnant. She was last unwell on the 15th of May, when the period suddenly stopped without any apparent cause on the second day. Since then she had had a good deal of abdominal pain, which obliged her to keep in bed; there had been fever, nausea, vomiting, and insomnolency. A tumour had also formed in the lower part of the body. All these persisting, led her to seek admission into the Hospital.

In addition to general malaise, thirst, loss of appetite, vomiting, &c., she complained of severe abdominal pain, which compelled her to bend forward. The abdomen was distended and tender, the swelling being especially from the umbilicus to the left iliac region, entirely filling the iliac fossa. The tumour was rounded and immoveable; its relation to the fundus uteri could not be determined; the cervix was pushed to the right side, and against the posterior aspect of the pubis. On the left of the cervix a hard, resisting, nonfluctuating tumour was felt, extending behind the uterus, so as

to resemble retroflexion. There was not, however, any groove of separation to be felt between these two vaginal portions of the tumour, and movement impressed on the hypogastrium is directly communicated to both, but is not perceived in the cervix. The tumour felt in the vagina was clearly connected with that in the abdomen, and the patient declared that none of this swelling existed prior to the 15th of May, but had all occurred since; nor had she any uterine affection previously. Ordered fifty leeches over the abdomen, opium internally, and laudanum poultices.

May 26th.—Much better. The abdominal pains much relieved; there is less fever; she slept well; the tumour is less tender, but otherwise the same. Ordered to repeat the leeches, Seidlitz water, extract of opium and quinine wine.

In the following week the improvement continued. She had no pain except on moving, but no change was revealed on vaginal examination, except that the tumour was harder than on admission.

June 2nd.—Not so well. Had a recurrence of the first symptoms, aggravated by vomiting, which yielded ultimately to strychnine. On the 15th menstruation did not appear as it should have done, but after some days the patient experienced pains in the right thigh, and the whole womb became œdematous as if from phlebitis. Up to the 30th she continued much the same, when she suddenly died.

On *post-mortem* examination the brain was pale; the lungs, liver, kidney, spleen, were all healthy; no abdominal effusion nor trace of peritonitis. The uterus was pushed to the right, the cervix jammed against the pubis, but it was otherwise healthy, as were the ovaries and all the ligaments. The uterus had no connection with the tumour, which was developed in the subperitoneal cellular tissue of the left iliac and prævertebral fossa. It was very tense and non-fluctuating; it commenced at the second lumbar vertebra, and descended in front of the left half of the other vertebra, filling the left iliac fossa, and pushing forward the sigmoid flexure. Below it pressed upon the bladder, and pushed forward and to the right the cervix uteri. Its lowest portion corresponded with the retro-uterine *cul-de-sac*, which, however, showed no evidence of peritoneal adhesion, the wall of the tumour being formed of fibrous membrane about a quarter of an inch thick. Internally it was divided into several pouches, communicating with one another. It was filled with a large

quantity, about four or five pints of very unhealthy pus. The cyst formed at the expense of the cellular tissue of the sheath of the psoas was easily enucleated, and underneath it, on the left side, was seen the healthy vertebral column; the psoas muscle, the blood-vessels and nerves, were all healthy.

It is unnecessary for me to recapitulate the various symptoms which this patient experienced, in order to prove that the symptomatology and progress were very different to those of phlegmons of the iliac fossa. Nor need I dwell at any length on the peculiarities which this purulent cyst offered, with fibrous walls developed in the sub-peritoneal cellular tissue, the formation of which could not be attributed to any lesion of the surrounding organs. It is evident then that this purulent collection had not been caused by inflammation of the iliac cellular tissue, in the midst of which it existed; for even that which immediately surrounded it remained perfectly healthy. All these circumstances seem to me to admit of an explanation, which, if not absolutely true, has at least very great probability. The thickness of the walls of the cyst, their fibrous structure, the imperfect septa which projected into the interior, establish first, that the cyst was of ancient date, contrary to the statement of the patient; and this demonstrates that the tumour which this person carried without knowing it, was insensible, that it produced no effect on the constitution up to the time when by its further progress it began to compress the genital organs, and thereby to prevent the catamenial secretion, and that eventually it became the seat of an inflammation which revealed itself by a train of very serious symptoms. So that, in accordance with the general conduct of the class of tumours to which, in my opinion, this belonged, this cyst, placed immoveably beneath the subperitoneal tissue, gave no indication of its presence during the first period of its evolution; its existence only became evident at the second period, when inflammatory action was set up in it, a course which may be regarded as the normal one for an hydatid cyst. That such was the true character of this tumour, is, I believe, shown by the anatomical relations of the cyst; by its subperitoneal connections; its postero-lateral, or rather lateral, relations to the uterus; the character of the fluid contained in it, which however I unfortunately neglected to examine sufficiently to determine whether or no it contained any debris of hydatids; and this opinion is, I think, strengthened especially by the fact

of the absolute integrity of all the surrounding organs. This retrospective diagnosis becomes all the more probable when we compare it with cases published by my collegue M. Charcot, in his work on hydatid cysts, especially that one which formed the basis of his work, and is referred to below.*

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* Obs. de M. Charcot, luè à la Société de Biologie (*Gazette Médicale*, 1852, p. 540).

I shall commence a description of cases of hydatid cysts developed in the subperitoneal cellular tissue of the female pelvis, by an anatomical account of the case, which I have the honour to present to the Biological Society.

In this specimen there are two hydatid cysts developed in the subperitoneal cellular tissue of the true pelvis, between the rectum and the generative organs. These two cysts are regularly spherical, of nearly equal volume, about five or six centimetres in diameter, and adhering to one another in a small part of their circumference. The larger of the two is feebly united behind to the rectum by loose cellular tissue; it is about three or three and a-half inches from the anus, more to the right than the left of the intestine—its union with the second cyst is so intimate that it cannot be separated except by injuring the cyst wall itself. The second cyst is situate lower down and more anteriorly; by its anterior surface it is united to the cervix uteri for about one inch, and also for about one inch and a-half or two inches to the posterior wall of the vagina. The union with the generative organs is very close by means of firm dense fibrous tissue.

The posterior cyst has opened into the rectum by ulceration above the anal orifice; this perforation being about one-fifth of an inch in diameter. No communication exists between the cysts, and the anterior one does not communicate either with the vagina or uterus.

Before dissection of the lamellated cellular tissue which enveloped the cysts and united them together, they formed an elongated mass oblique from before backwards, and from above downwards, situate beneath the peritoneum. This structure in fact, descending on the anterior surface of the rectum, enveloped the cyst above and on each side, and then was reflected over the posterior aspect of the uterus. The recto-vaginal *cul-de-sac* was thus completely effaced and filled by these tumours, they did not, however, descend to the perineum, the lowest of them being distant about an inch, even at its most depending part. Their development took place chiefly in an upward and antero-posterior direction; above, the peritoneum was pushed aside; behind, the rectum was flattened, and its muscular fibres developed to overcome the obstacles to the course of the fæcal matter; in front the uterus was flattened against the pubis, the cervix being flattened and considerably elongated. Moreover, the uterus was carried bodily upwards and forwards, while, on the contrary, the vagina was depressed, and a tumour projected into its cavity immediately in front of the cervix uteri.

All these points might certainly have been demonstrated during life, and

Granting the correctness of this diagnosis, and I confess I do not see how it can be disputed, let us consider what are the signs which distinguish hæmatoceles, with more or less certainty, from hydatid cysts of the pelvic cavity. In doing so I shall not refer to those which, do not appear to me to possess any particular diagnostic value though they are considered by others to do so.*

We find first that the age of the patient is of little or no importance, for hydatid cysts frequently occur in other parts of the body during the menstrual age. Secondly, the cyst may be, and not unfrequently is, simple; so that though, according to Charcot, they are, as a general rule, multiple, yet for purposes of diagnosis we cannot lay down any absolute rule. Thirdly, as regards the origin and progress of hydatid cysts of the pelvis, they, like those occurring in other parts, may be quite unknown to the patient up to the time when they become the seat of inflammatory action: consequently, the statement of patients, instead of aiding, may, in fact, hinder the diagnosis, by suggesting that the tumour in question is of recent

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even after death they could easily be made out by rectal and vaginal examination, and especially by combining the two. The dissection of the cysts themselves, showed that one of them, the nearest to the rectum, received its arterial supply, which was copious, from a good many branches of the middle hæmorrhoidal vessels, which for this purpose were deflected from their usual course. The other cyst in the same way, especially in its anterior surface, was supplied either from the vaginal arteries of the left side or from the main trunk of the uterine artery of the right side. The smaller ramifications of these arteries penetrated even into the tissue of the fibrous pouch.

The rest is only such as is common to hydatid cysts in general:—The membrane proper was thick, formed by resisting coriaceous fibrous tissue. Its internal surface was irregular and lined here and there by a white friable material, adherent to the pouch, into the interior of which it projected at some points so as to form incomplete chambers.

The hydatids themselves had their usual characters. The fluid contained in the interior of the vesicles was submitted to microscopic examination, and the echinococci with their hooklets and suckers were plainly visible; here and there, too, they were seen in an isolated condition.

We were not able, unfortunately, to gather any particulars as to the phenomena observable during life. And I regret that we did not also examine the other viscera, the liver for example, to see if they contained any trace of these hydatids.

* Voisin, *loc. cit.*, p. 57.

formation; whereas, on the contrary, it may be of very long standing. Lastly, we find that hydatid cysts, instead of remaining in the same condition, as has been stated, and presenting the same feeling of resistance while undergoing the process of inflammation, seem, on the contrary, to acquire increased hardness, and to become considerably more distended; consequently a change in the consistence of the tumour cannot be regarded as a diagnostic sign of hæmatocele. I need not add, that the absence of any vibratory fremitus is a matter of no importance, not only because its existence was observed in one only of the cases collected by Mr. Charcot, but also because this sign is often wanting in cases of hydatid of the liver, no matter how great the tactile skill employed.

From the comparatively valueless character of the preceding signs, it is evident that the differential diagnosis must rest rather upon the presence or absence of uterine symptoms before the development of the tumour, or perhaps I ought rather to say, before its existence is demonstrated, and especially on the characteristic signs afforded by digital examination of the hydatid cyst or of the hæmatocele. At present I have only to consider the signs of hæmatocele symptomatic of difficult menstruation, as distinguished from those of hydatid cyst. In the former, the development of the tumour is preceded by uterine phenomena, in the latter we get symptoms of pelvic tumour. In hæmatocele the symptoms are caused by the passage of blood into the abdominal cavity, which takes place at a longer or shorter period after the menstrual disturbance during which dysmenorrhœal pains continue, and increase at each catamenial period in the absence of any discharge: while in the case of retro-uterine hydatid cysts there is an entire absence of any pain prior to the inflammatory attack. But the main difference, however, lies in the fact, that these expulsive pains and other uterine symptoms exist after the production of the hæmatocele, while they are almost, if not entirely, wanting in the case of an inflamed cyst; thus the existence or absence of well-marked morbid symptoms of the generative organs before the manifestation and during the continuance of severe symptoms, referable in the one case to hæmorrhagic peritonitis, in the other to inflammation of an hydatid cyst, constitutes one of the most important elements in the differential diagnosis of these two affections.

The other differences arise after the escape of a part of the catamenial secretion into the abdomen, where, having traversed the

Fallopian tubes, it sets up peritonitis and originates the retro-uterine tumour, the distension of the generative organs not remaining very marked, so that the pelvic tumour appears, as it were, complex. The uterus and Fallopian tubes increased in volume from the retained menstrual fluid, appear, still to be affixed to the front part of the effused fluid. In the case of hydatid cysts, on the other hand, these organs appear empty, pushed on one side, and at the same time flattened against the pubis; they also appear not only independent of the tumour which compresses them, but to have either diminished in size, or at least, not to have increased. From all this, and still more where one of the broad ligaments is much flattened by the hydatid cyst being placed in the medio-lateral region, as in the preceding case and in that published by Mr. Roux,* the tumour seems to be abnormally placed for a hæmatocele.

When the hydatid cyst, after filling part of the posterior vaginal *cul-de-sac*, and an entire lateral *cul-de-sac*, and emerges into the abdomen, it is placed at first on the same plane as the uterus, afterwards on a plane anterior to it, pushing the abdominal wall before it. This abnormal situation of the tumour, which particularly attracted the attention of my colleague M. Becquerel, may serve to facilitate the diagnosis, at least in some, if not in all cases, especially when the cyst is developed on one side, and presents the characters peculiar to such tumours. These are: first, their firm consistence, which is frequently so marked that they have even been mistaken for solid tumours;† secondly, their sub-peritoneal situation and their intimate connection with the cellular tissue in which they are developed: on which account it is sometimes difficult to determine their precise limits, so that they appear, by vaginal examination and also by abdominal palpation, to be intimately connected with the pelvic bones; lastly, their complete immobility, which is much more decided than that of hæmatocele. I believe also, and this is the reason why I have insisted so much on the error I once made in diagnosis, that when we are put well on our guard against the impossibility of confounding a hæmatocele with an hydatid cyst of the pelvis, we shall be able to establish the diagnosis with great probability, so that in case of urgent danger we may have recourse to an exploratory puncture, which in suitable cases, may lead to the cure of the hydatid. I have not proposed this as a

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* Bourdon, *loc. cit.* p. 56.

† Charcot. *loc. cit.* Obs. de Parck, p. 541; Obs. de Roux, p. 542.

means of establishing the diagnosis in any of the preceding cases, because it is so extremely dangerous, and may be followed by such very grave symptoms, that in one case observed by my colleague M. Oulmont,* death resulted. But it is unnecessary for me to dwell longer on this point, because I shall have to consider the value of puncturing hæmatoceles under the head of Treatment.

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* Oulmont, *Bulletins de la Société médicale dès hôpitaux de Paris*, 1859, t. v. n° 1., p. 36.

CHAPTER IV.

TREATMENT.

From this, perhaps, overlong study of the subject of menstrual retention, it appears that, according to the variety, the duration, and the severity of the symptoms which it excites, so will the therapeutical indications vary. We may therefore have to resort to a great variety of operations, and try many of the remedies of the Pharmacopœia.

In order that I may not lose myself in inextricable details, I shall refrain as much as possible from entering into particulars, and limit myself to a discussion of general indications. I shall especially avoid formularising any plan of treatment, which, to be really useful, ought to be applicable to every case; this is far better left to the tact of the practitioner. To avoid the gaps which this chapter might otherwise present, I have taken care to report in the preceding pages cases of every variety of menstrual retention. I shall, therefore, be more at liberty to discuss different points of treatment, some of which aim at removing the obstacle which hinders the excretion, others are for the purpose of favouring a resolution of the symptoms created by the functional disturbance.

The most important point to be considered is the various means at our disposal to obviate the difficulty of excretion, since the functional disturbance may be symptomatic of a great variety of morbid conditions; consequently to attain this object we must in one case adopt a plan of treatment entirely different to that required in another: for example, to cure a catarrhal affection, we must bear in mind the diathesis of which that affection is a manifestation. There is less need for variety of treatment in dealing with the second indication; everything being subordinate to the constitutional condition of the patient, which may render the remedies more or less active. I have already pointed out the peculiarity of each variety of retention: sometimes we must consider, first of all, the obstacle which opposes excretion; sometimes, on the contrary, before combating this, we must attack the morbid condition which is superadded, and which is

the cause of the continued functional disturbance. I shall not revert to this subject, which, if acted upon, would separate cases of menstrual retention, into two classes: the one comprising those cases which may be regarded as surgical, because they necessitate an operation for the treatment of the physical obstacle: the other would include those varieties which by contrast may be called medical, inasmuch as they do not require, and would, indeed, often be injured by, the use of the knife.

In the first two varieties of menstrual retention, that is to say, in the congenital or acquired imperforations or obliterations of the vulvo-uterine canal, the primary indication to be attended to is, the re-creation of the excretory passage; and this should be done without delay, in order to avoid as far as possible any distension of the genital organs, which alone is the cause of the escape of the retained blood into the abdominal cavity. Setting aside this danger, when the passage is blocked up by a mucous or fibrinous diaphragm of variable thickness, no one can entertain a doubt as to the treatment to be adopted. The case is different, however, when there is an absence of the vagina, or when the obliteration occupies all or the greater part of this canal.

In the first case, in order to avoid as far as possible the passage of blood into the abdomen, we must choose the most opportune moment for operation; and afterwards guard against the exercise of any pressure on the abdomen, which, in Locatelli's case (Case VI.) appeared to be the determining cause of the intra-peritoneal effusion. The best time for performing the operation is that in which the generative organs are in the least active condition. In this respect I am directly opposed to the authority of Dance, who, on principle, but at the same time for the facility of the operation, recommends us to wait till the generative organs are distended by another menstrual period, and then to operate at a time when they are in a state of the greatest activity. I, on the other hand, advise waiting till eight or ten days after the menstrual epoch, when the organs concerned are in a quiescent state, and far removed even from the next period. I also recommend that, instead of incising freely either the hymen or the vaginal diaphragm, or the obliterated cervix uteri, which in four of the cases I have reported, viz. Cases II., III., IV., VI., ended fatally, the employment of a small trocar, such as is used for hydrocele, with a piece of gut attached, for the purpose of avoiding a too

sudden emptying of the uterine cavity, should be adopted. When the uterus is emptied too quickly we are very apt to get a simultaneous contraction of the Fallopian tubes, and the dread of this makes me reject the employment of a catheter after the puncture for the purpose of securing the escape of blood. If the flow stops it would necessitate more punctures until, having evacuated the greater part of the retained blood, we might by a free incision of the obtruding membrane, and the subsequent use of dilating means, guarantee the final permeability of the excretory canal.

It may be thought, perhaps, that we are recommending unnecessary precautions for fear of an exceptional accident, the occurrence of which, though unforeseen, would nevertheless be a bitter reproach to the surgeon if an unfortunate result occurred. It may also be thought a contradiction that I should be so careful about such exceptionally sad results from simple puncture of the hymen, and yet, in the case of absence or fibrous coarctation of the entire vagina, I should recommend an operation which is so often fatal, that Boyer* objected on principle to its ever being performed. My opinion is based, in the first place, on the success of a certain number of operations, two examples of which I have already given being so remarkable that they may serve as guides under similar circumstances. But secondly, it is founded on the almost uniformly fatal termination of cases of vaginal imperforation which are left to nature, a result so general that Boyer, in defending the do-nothing plan of treatment in these cases, could not cite a single instance in which the plan he recommended had been successful. Lastly, it is supported by the evidence afforded by those who, though escaping death, have been left in so deplorable a condition that they would rather undergo any operation, however terrible, than endure the sad prospect of years of suffering and miserable old age. All these reasons incline me to advise an operation, dangerous though it may be, in cases of absence or contraction of the vagina; care being taken not to lose valuable time, for each menstrual epoch increases the distension of the generative organs. I believe the best time for performing the operation is when there is least activity in these regions, we should also be careful to avoid a too sudden emptying of the uterine cavity, and thereby escape the danger of the passage of

* Boyer, *Traité des maladies chirurgicales*, t. x. p. 447.

blood into the abdomen, which occurred in the case of de Haen (Case IV.), and in the more recent case of M. Schuh.*

Having settled thus much, it remains to determine the nature of the operation to be performed. I cannot recommend that adopted by Antoine Dubois, viz., puncturing the tumour *per rectum*. Such a plan can only palliate, and moreover it is, I believe, more dangerous. A case of this kind is referred to below,† the only case within my knowledge, where the operation has been resorted to. We ought, therefore, to endeavour to make a vagina either by the aid of the bistoury, as was happily done by Debrou, or by detaching the bladder from the rectum by means of the finger, as was recommended and

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* *Obs. de Schuh. Wochenblatt der Zeitschrift der Gesellschaft. der Aerzte zu Wien*, nº 31, 1857.

† Obs. Antoine Dubois (Boivin et Dugès, *loc. cit.* t. i. p. 272).

Congenital absence of the vagina; puncture by the rectum. Fatal peritonitis.

M. Ant. Dubois was consulted by a young lady, 16 years of age, who at each menstrual period, had symptoms of general plethora, with pains and swelling of the abdomen in the hypogastric region. A tumour could be distinctly felt in that situation, having a sort of doubtful muffled fluctuation. In examining the vulva, it was found that between the labiæ there was only a deep grove or furrow, in the middle of which was a funnel-shaped opening, the urethra. With some difficulty, Madame La Chappelle introduced her long thin finger, and reached the bladder; it was proved by the sound that this was really nothing but the urinary reservoir. Examining *per rectum*, the finger detected, at a certain distance up, the same tumour which could be felt in the hypogastrium, and between the bowel and the urethra there was nothing but a very thin septum.

M. Dubois was hesitating as to the means to be adopted, when a case precisely similar occurred in his wards, except that the case was more urgent, the symptoms more severe. A trocar was plunged into the tumour through the rectum, a good deal of altered blood came out, and was followed by great improvement, but a few days afterwards peritonitis set in, and the patient died. This was not an encouraging result, and the learned professor declined trying it again in the former patient. Professor Boyer was of the same opinion; but M. Dupuytren advised operating. He plunged a bistoury into the middle of the fibro-cellular substance, which occupied the place of the vagina, dividing thus the urethro-rectal septum as far as the uterus, without injuring either of those viscera. The tumour was opened, and great relief followed the escape of the retained blood. Unfortunately inflammation was soon developed, and the patient died in a few days. So that both these young girls died three or four days after the operation.

practised by Amussat. The first of these plans, though extremely difficult to perform, because we must carry the knife between the bladder and rectum without injuring either, is nevertheless, the only course to be taken when the vagina is quite obliterated, and its place occupied by a fibro-cellular septum. But the case differs somewhat when there is complete absence of the vagina; for though the operation is a speedy one, inasmuch as the uterus is reached and punctured at once, it is nevertheless exceedingly dangerous. On the other hand, the proceeding of Amussat is much less dangerous as regards injury to the bladder or rectum, and is therefore preferable, though it, too, not seldom terminates unfavourably.

The mucous membrane of the external genitalia cannot be stretched to any indefinite extent. Under the influence of the distension which it undergoes in the first attempt, and the subsequent inflammation it generally yields at the second or third trial, the finger enters the cellular tissue, and produces a kind of enucleation. It happens thus that the bladder and rectum are stripped in this manipulation, and it was incumbent on Amussat to warn those who wished to imitate him of this danger. The consequence of this perforation of the mucous membrane, and of the first enucleation, is an attack of inflammation, which in my case, as in that of Amussat, prevented any further operation for some days. As a consequence of this, all future attempts are very painful, and dilators are borne with great difficulty during the month which is necessary to secure sufficient dilatation to proceed to the last operation—a step which requires the introduction of the speculum, in order to puncture the cervix through the artificial vagina. With Amussat's case in my mind, I adopted his proceeding, and became convinced that it must always be very difficult of performance, not so much as regards the operation, which is simple enough, but because few patients will submit to its being so many times repeated. Unless, then, we can modify this operation, I fear the greater number of patients will lack the needful courage for such a proceeding, and if not compelled by their friends, will abandon it when not more than half completed, as happened in the following case:—

Case XLIX.—*Congenital absence of the vagina; symptoms of retention at* 17*; periodical recurrence of hypogastric pains, with enlargement of the abdomen for five years; at that time micturition and defæcation became impossible; severe intra-pelvic pain followed*

by purulent escape per anum; sanio-purulent discharge for fifteen days, bloody discharge for a month; recovery, but still monthly recurrence of pain followed by an escape of blood by the rectum; six years after, formation of a genito-rectal fistula. Amussat's operation; two years after the operation, escape of menstrual fluid by the fistula, which remained as a sort of artificial vagina; a year after this, suppression of the discharge; subsequent menstruation by the anus.

L. F. C., aged 28, was admitted into *la Pitié*, June the 2nd, 1856. She had come up to Paris in order to be operated upon for imperforate vagina, not only because she wished to be married, but also because of the suffering she experienced every month. There was no hereditary ailment in her family, nor any history of congenital malformation among them.

Her early life was healthy, but she does not remember at what age she began to menstruate, nor does it seem that the establishment of that function was attended by any particular discomfort, indeed up to the age of 16 or 17, though she had worked hard, and lived hard, she had not apparently ever experienced any intra-pelvic disorder. About that time she began to suffer pains in the lower part of the body, she also became, and has still continued, very fanciful; soon after these pains began, her abdomen began to swell, and she was sick. This continued so long, that she was obliged to leave her situation and seek medical advice; the opinion given by those she consulted, notwithstanding her denial of the fact, was that she was pregnant; some, however, thought it was dropsy; but none of them inquired into the condition of the generative organs. This was in 1846. The following year she was worse, the abdomen went on increasing in size, and she became more nervous and excitable. This state of things went on during the next two years gradually intensifying. At the beginning of 1850 the bowels became so constipated that she could not get relief, except artificially, and so difficult was micturition that she was obliged to have her urine drawn off. The abdominal pains also increased and obliged her to stay in bed at least half of each month, and at other times she was very little better. In July of that year, while violently exerting herself, she suddenly experienced severe pain in the body and a sort of crack, attended she said by a noise as if something had broken. She at once went to bed, her sufferings being very great, and while undressing she observed that a quantity of pus passed *per anum*. For fifteen days

this discharge continued, and at the end of that time a discharge of blood came on which lasted four weeks; in all, according to the statement, at least fifteen quarts of fluid, pus and blood, passed from her.

During all this, the abdomen diminished in size, and she felt greatly relieved. The bowels acted naturally, and she was able to pass her water. For a month at least, she was free from pain, but it then returned and was of the same character as before though less violent, and after lasting a few days more blood passed *per rectum*. For several months this went on, each period being accompanied by severe pain, and followed by a discharge of blood from the bowel. If the period happened to be delayed, then the pain was more severe, and the discharge would be preceded by an escape of pus *per anum*. There was this peculiarity about the pain, the explanation of which we shall see presently, for twenty-four or thirty-six hours it would be felt mostly in the middle and left lateral hypogastric regions, then it would be of a dysmenorrhœic character, then it would change to the right iliac fossa which swelled up, then it would become lancinating, and remain so till the blood escaped. The establishment of the genito-rectal fistula relieved her greatly, and her general health improved, but still she suffered a good deal at times, and this led her sister to examine her, when she discovered that she was malformed, and she at once applied for admission into the Hospital.

She was a stout healthy-looking country girl, well-developed and muscular.

On examination, the orifice of the vulva was small, the meatus urinarius occupied its normal position, but was so large that the little finger easily entered the bladder; below it was a small oval *cul-de-sac* about a quarter of an inch in depth, covered with mucous membrane, presenting no trace of cicatrix and no evidence of any cavity beyond it. With one finger in the urethra and one in the rectum, it was apparent that the distance between them was very slight, that in fact the rectum was in contact with the urethra and the floor of the bladder without any intervening vagina.

Carrying the finger further up the rectum, it was found that instead of meeting with the normal uterus, a large tumour was there, not tender to the touch, regular in shape, having a small conical appendix at the lower part, and situate entirely on its left side; this was the cervix uteri. By combining rectal with abdominal palpation, it was manifest that the tumour in front of the rectum consisted of two parts, the one in front and to the left was the uterus ante-

verted; the other less resisting, of a pasty consistence and irregularly round, formed the bulky mass to the right of the cervix, and could be felt in the iliac fossa, it was as it were, superadded to the uterus; this it was which had displaced the uterus, and it seemed as a diverticulum, in which the menstrual blood escaped from the genital organs before passing *per rectum*. At any rate it increased in size when the patient suffered her monthly pains, prior to the escape *per anum*. Nowhere could I discover the fistulous opening. She was ordered rest, a bath, &c.

I determined to perform Amussat's operation, for the following reasons.

1. Because the condition of the parts was precisely that for which Amussat recommended his operation.

2. Because if this operation were not in this case as imperiously demanded as in that of Amussat, there was also less risk attending it, as the genital organs were not so seriously distended.

3. Because the patient was incapacitated from attending to her ordinary duties.

Accordingly on *June 6th* I performed the operation, one assistant pulling the urethra in one direction, another the rectum in the opposite, while I with the two fore fingers in a **V** shape, endeavoured to stretch and separate the parts so as to form a new vagina. This process was very painful, but I succeeded in getting the finger in as far as the first joint, and afterwards kept a piece of sponge there.

7th. There was great pain after the operation, and the patient begged the sponge might be removed as it caused her very great suffering. All the night she was in pain, and despite the directions given, she took away the dilator. It was then impossible to proceed, as the patient would not submit to further interference.

On the *8th* I made a second attempt, and at the end of the proceeding the new vagina measured nearly one inch and a-half in depth, and about two inches from before backwards. A sponge-tent was again applied.

On the following day another attempt was made, when the mucous membrane seemed, as it were, to give way, and the finger entered some cellular tissue, causing great distress to the patient. This occasioned some sanguineous discharge, very much the same as on making a false passage *per urethra*. Instead of a sponge tent a small plug covered with cerate was introduced and the patient kept quietly in bed.

11th. After this third dilatation the patient suffered a great deal

both in the pelvis and iliac fossæ: there was vomiting and some little constitutional disturbance. Ten leeches were ordered to the iliac fossæ, to be followed by poulticing and rest. This gave marked relief. The inflammatory symptoms subsided, and on the 15*th* another attempt was made.

On the 18*th* this was repeated, the opening made being sufficient to admit the first and middle fingers as far as the second joint. At the bottom of this newly-formed vagina the cervix uteri, separated by a thin bed of cellular tissue, could be felt, the orifice looking backwards and appearing to be drawn there by adhesions. It was decided that a last attempt should be made prior to puncturing the uterus by the vagina to dilate the latter yet further and so come close upon the former. But before doing this menstruation came on again by the rectum, and meanwhile the sponge-dilating process was neglected for one reason or another, and so the vagina gradually contracted again.

On the 2*nd August* the patient wished to leave the Hospital, and at that date only the lowest portion of the vagina, covered with its mucous membrane, preserved its dimensions; the rest formed a mere fistulous tract.

For eight months I heard no more of this patient. She then came to me looking less healthy and strong than before. Since she left the Hospital she had menstruated *per rectum*, though in less quantity than usual. She came to consult me because she had passed over one period and was beginning to suffer pain, as she had done in 1846. Two days after I was sent for to see her, she was in bed and suffering intense pain. Menstruation had not come on; her body had swollen, and was tender on pressure, especially in the right iliac fossa, which was filled with an ill-defined swelling. She was accordingly admitted into *la Pitié*, and twelve leeches at once applied, followed by poultices and warm emollient injections. In the following night menstruation came on *per rectum*, and gave her immediate relief. I then tried to see what remained of former operations; but the patient, rather than submit to examination, left the Hospital. I saw her again at different times during 1857 and 1858, for milder attacks of the same character, and found that the parts remained much in the same state as before.

At the end of 1858 she came to tell me that five weeks before, after severe pain, she had menstruated by the vulva, and she now wished to know if she might marry. Doubting her statement, I re-

quested an examination at the next period, and I then found that the parts were very little altered, but through a narrow opening at the bottom of the vagina the discharge escaped; the vaginal canal to my surprise I found covered with *carunculi myrtiformes* as in the natural state. The vaginal orifice admitted the fore and middle fingers, was ·025 in depth, and lined with a normal mucous membrane. At the bottom (? top) of the vagina was a minute aperture through which the sanguineous fluid came *guttatim*.

I again wished to admit her into the Hospital for the purpose of dilating this orifice, but, as I could not guarantee that she would be made fit for married life, she refused. Again and again did she try to gain my consent to her marrying. She still continued to menstruate *per vaginam* and with very little pain.

In October, 1859, this was changed; the discharge *per vaginam* ceased, and after acute pain returned again *per rectum*. Suffering compelled her to consent to a further examination in January, 1860; but nowhere could I find any vaginal opening from the uterus. And, inasmuch as I could not promise to fit her for marriage, she obstinately refused to consent to any further interference.

In comparing this case with those of MM. Amussat and Debrou, we see what difficulties are to be met with in any attempts to make an artificial vagina, and the impossibility of deciding the question as to the capacity for marriage until the final result of the operation is known; this cannot be until after menstruation has taken place easily *per vaginam* for some little time; should such be the case, the question as to the propriety of marriage would still remain open. What we should have to fear is, that in the event of pregnancy labour would be very tedious and difficult, in consequence of the imperfect condition of the cervix and the peritoneal adhesions which the affection of the generative organs might have occasioned. In M. Debrou's case, these occasioned the death of both mother and child. Still the unfortunate termination of that case does not imply that we ought necessarily to forbid marriage. If we reflect on the circumstances connected with that case, we shall see that the same thing might happen in any number of simple labours, especially when the forceps were employed. We cannot therefore attach any great importance to it.

The most important feature in these cases is, that in nearly all of them, either during the occurrence of menstrual retention, or follow-

ing any surgical interference which may have been thought necessary, pelvi-peritonitis is set up. Such a result is therefore not at all improbable, if there be tedious labour and surgical interference becomes necessary. At the same time, the dread of such an occurrence cannot justify us in absolutely forbiding gestation, though it may necessitate some reserve when consulted as to the desirability of marriage after an operation of this kind.

I shall not point out the several operative proceedings which may be adopted for the various malformations or obliterations of the vulvo-uterine canal such as constitute our two first classes; I will only remark in reference to one of them, that, namely, where the excretion is prevented by morbid adhesion of the cervix to the vaginal walls, that even after a separation has been accomplished, the greatest difficulty is experienced in preventing its recurrence. Sometimes it is necessary to repeat the operation, as in the case of M. J. P. Frank, previously quoted.* The dangers of defective excretion resulting from these adhesions, which are mostly caused by the application of caustics to the cervix and the difficulties which follow their employment, clearly indicate the necessity for great care and the desirability of not resorting to such treatment whenever it can be avoided. I cannot too strongly protest against the intemperate employment of caustics to the cervix uteri, which is very apt to lead to adhesions of this part to the vaginal walls. I have seen cases of this kind quite recently, where the injudicious employment of caustics had produced, in one case, obliteration of the cervix; in another, contraction of the cervico-vaginal orifice; and in another, contraction of the cervico-uterine orifice, leading on to more serious consequences, to which I shall direct attention in the Part on Pelvi-peritonitis.

The extreme severity of the inflammation of the pelvic-serous membrane which may occur under these circumstances, and has occurred even after simple catheterism of the uterus, should make us very careful in our treatment of the third class—in those, that is to say, where the retention is symptomatic of a congenital or acquired contraction. The fear of such an occurrence should regulate our practice in this respect, for we know that the performance of even the simplest operation upon the uterus may sometimes end in death. There is always greater danger of these evils when the generative organs are in a state of activity; consequently we ought not to

* *Vide* p. 25.

attempt any interference of these parts during the menstrual period. After that has passed we may have to combat congestion, which is both a cause and a consequence of defective excretion, and the best means of meeting this is by the application to the cervix of four or five leeches, followed by a tepid bath. Very often a larger number of leeches is ordered, but there is no need for this—indeed, when four leeches are applied and draw well, they will quite fill an ordinary sized speculum, such as is used for this purpose, and the amount of discharge which would follow fully equals that produced by a larger number. Moreover, when many are put on, they will only jostle against one another, and so fall off sooner than they otherwise would. As regards their application, it really matters but little whether they take hold of the cervix or of the vaginal *cul-de-sac*, which is the more frequent position. One precaution I would recommend, though to the particular cases now under consideration it does not apply: it is, the placing of a plug of lint into the uterine orifice, to guard against the entrance of the leeches into the uterus for when a leech attaches itself to the cervical cavity it causes great suffering to the patient. Forgetfulness of this precaution may result very disagreeably, while all the benefit of the bleeding will be lost. A case of this kind I shall relate in the Part on Pelvi-peritonitis.

When, after this application of leeches either to the cervix or to the upper and inner part of the thighs, the discharge is easily produced, it ought to be favoured by absolute rest in bed, and the continued application of hot emollients to the abdomen. To these, other therapeutical agents must be added when the discharge either comes on defectively or not at all, notwithstanding that the cervix offers no other obstacle than that which results from its constriction. The remedies required then are those which excite consensual uterine contraction. It is then that the employment of emmenagogues, which were dangerous so long as the cervix remained congested, become useful by regulating the action of the uterus. As soon as the dilatation of the uterine orifice allows the escape of the catamenial secretion, the ergot of rye is the remedy required. I must confess, however, that after having tried this drug on several occasions I have abandoned it because the increase of the discharge produced under its influence is only obtained, as in Case XXVIII., at the cost of a good deal of pain. I think the emmenagogues properly so-called are decidedly best under such circumstances.

Mugwort, absinthe, rue, savin, and saffron, possess the same properties as the ergot of rye, but are less energetic, and far less painful. They may either be taken internally, or be applied locally by fumigation, both of which plans I have tried, but I think they are best taken internally, and the mode I prefer is a hot infusion of either mugwort or saffron taken at intervals. There are, however, a number of idiosyncrasies in patients which it is impossible to foresee, which make us prefer a remedy which has been found to act well the first time, in preference to another which may not succeed so well. Sometimes it is useful to add to these infusions the employment of the emmenagogue mixture of the French codex. More frequently it is better to add an anti-spasmodic mixture, containing opium and ether, to combat the nervous erythysm to which these patients are subject. As regards other and minor matters, much must be left to the practitioner's appreciation of the several indications—above all, attention must be paid to the digestive organs. The administration of emmenagogues, unless otherwise contra-indicated by the existence of affections of the uterine appendages, or by the severe pains which they occasion, should be continued during the entire menstrual period, in order to secure the complete evacuation of the menstrual secretion. When the period is past, warm emollient applications should be applied to the stomach for several days; warm baths and soothing injections should be prescribed, in order to obtain complete inertia of the genital organs, and to remedy any fibrous coarctation of the uterine orifice which may impede excretion.

I have previously remarked on the extreme rarity of simple stricture of the uterine orifice as an efficient cause of difficult excretion, and how very rarely we have to operate for it. I have never had occasion to do so, and I shall therefore say little on this point; but will only add, that it seems to me preferable in any case where we must interfere to incise the cervix right and left with a lithotome, as was done in Case XVII., endeavouring, during the cicatrisation, to keep the parts asunder by means of dilators. This mode of operating is, in my opinion, better than the use of bougies without incision which is always tedious. I prefer this in consequence of the many accidents, some fatal, which have followed the employment of Simpson's stem pessary, and a dread of these dangers should regulate the therapeutics of these uterine strictures, whether resulting from atresia or contraction of the orifice, or from an increase of its volume—especially when this is due to chronic

inflammation of the cervico-uterine mucous membrane, of which I shall speak presently.

During the acute period of our fourth variety of menstrual retention (symptomatic of hypertrophy of the cervix), there are the same indications to fulfil: thus, the flow may be induced by the application of rubefacients to the thighs, hot applications to the abdomen, emollient or belladonna fumigations, diaphoretic or stimulating drinks, such as simple infusion of coffee with the addition of some eau-de-vie. Should these means fail, we must have recourse to the application of leeches to the cervix, against which those who have never employed them have a very ill-founded prejudice. It should be added that in the case of cancer of the cervix, especially when it has reached an advanced period, as in Case XXII., the employment of these means, particularly of leeches, is contra-indicated. The cachectic condition of the patient and the dread of the occurrence of menorrhagia are alike prejudicial to depleting treatment. There is, moreover, the fear lest the blood exuded from the uterine cavity should increase the distension of the genital organs owing to its defective escape. There is some danger under these circumstances, of rupture of the cancerous uterus and the escape of the sanio-sanguineous fluid, either into the peritoneal cavity, as in the case recorded by Latour of Orleans, or into one of the abdominal organs.* The fear of the occurrence of such accidents as these, though they may not happen till a very remote period, may be a determining reason for practising amputation of the cervix in certain cases of cancer in that situation where the cutting instrument can completely surround the diseased mass without involving the peritoneum. Great care will be necessary after an operation of this

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* Case from *Rust's Magazin fur* 1834 (Duparque, *loc. cit.* t. ii. p. 14).

G. age 53, having ceased to menstruate for four years, had, after an improper intercourse, a bloody discharge from the womb, which was repeated at irregular periods. After some time the blood disappeared and the belly began to swell. Vomiting of coffee-ground matter came on and she died.

At the *post-mortem* examination the uterus was found enormously developed, its walls thin. The cervix thick and obliterated by a steatomatous tumour existing on the right side above the cervix. It contained a great quantity of matter analogous to that which the patient had vomited and which filled both the stomach and duodenum. *There was perforation at a point where the uterus and stomach were adherent.*

kind to see that no fibrous contraction takes place in the os and cervix during the process of cicatrization, such as occurred in Case XII., and which may lead on to obliteration of the cervix-uteri.

In the same way menstrual retention may be caused by the existence of a fibrous growth, either in the body or fundus of the uterus, or by a polypus, as in Case XVIII., and in all these cases operative interference may, under proper conditions, be necessary. I would, however, again urge the necessity of non-interference during or near the catamenial period, and the desirability of selecting a time when the generative organs are perfectly quiet; for we are pretty certain to set up some pelvi-peritonitis, especially by the pulling down of the uterus with forceps, which is generally required; it is therefore of importance that the parts be as functionally quiet as possible, so as not to increase unnecessarily the inflammation. At the same time, after having given relief to the catamenial retention, in those cases where it is caused by mere increase of the volume of the cervix of a non-malignant character, attempts should be made to diminish the engorgement, and it is at the non-menstrual period that we shall most likely be successful. The treatment necessary for this purpose will comprise both local and general applications of various kinds, which it is not possible to formulate.

It should be borne in mind, however, that though the greater number of these cases of cervical enlargement may be the result of chronic inflammation, yet they are, nevertheless, directly or indirectly, the expression of a diathetic condition. Whether this has been the determining cause, or whether it has merely stamped its character on the inflammation, all treatment must at any rate be subordinate to this one end. To determine this question we must patiently investigate all the antecedents of the patient and the character of the several diseases from which she has suffered, so as to discover the relation existing between these antecedents and the actual engorgement of the cervix. Among young women, scrofula is the more common cause, as other diseases generally manifest themselves at a more advanced age.

Coupling the history of these cases with the frequent coincidence in scrofulous subjects of a thickening of both the large and small labiæ, we are enabled to determine the nature of these strumous cervical engorgements. They either occur spontaneously at the time of puberty, or they are developed after puberty, following an accouchement either at term or prematurely. The diathetic cause of these cervical engorgements, and their frequently

scrofulous character, enable us to understand the success of the iodide, iodureted, and sulphurous applications; also, under what circumstances arsenical or alkaline preparations are required, and especially when we should recommend salt or warm baths, such as those of S. Sauveur. But in estimating the value of mineral waters, we must remember the advantages of the locality, the quiet simple life, early hours and regular habits; we must remember, also, the sedative influence of frequent baths.

In addition to these baths, much good may result from preparations of hemlock, especially that of the pill of conium of Guillermont, which has seemed to me to act as an opiate to the genital organs; and in all affections of these organs, whether cancerous or otherwise, it seems to act as a special narcotic, favouring resolution when that is possible, and diminishing the discharges which result from the pains.

Besides these remedies, local means must also be resorted to, to relieve the catarrhal affection, which was either the starting-point of the cervical engorgement, or which has resulted from the same diathetic influence. I need not enter into details on this point, because I shall have to consider it in the chapter on uterine catarrh, of which there are various examples, each with distinct indications. In that chapter I shall point out the different therapeutical indications to be observed in the several varieties of menstrual retention due to disease of the uterine mucous membrane: among which I may mention the various forms of dysmenorrhœa which comprise our 5th and 6th varieties. In those cases of menstrual retention which are analogous to retention of urine from inflammation of the neck of the bladder, the object during the acute period is to favour the dilatation of the uterine orifice by the means already mentioned, associating with them the employment of antispasmodics, either alone or combined with gentle stimulants according to the state of the nervous erythism or the constitutional condition of the patient.

I shall not dwell long on the therapeutical indications of nervous dysmenorrhæa, though I believe it may sometimes drive almost to despair both patient and doctor, from the intensity of the pain at the crisis, and the persistence of its duration. To this subject also I shall have to return when discussing hysteralgia, of which these dysmenorrhœas are but a modification. I may, however, direct attention to the inquiry whether this painful affection is symptomatic of any general condition, such as anæmia, chlorosis, or hysteria; or

whether, on the contrary, it is not a special neurotic affection, comparable with asthma. In the former case, of course, the treatment will be guided by the general condition. It will comprise not only what is necessary during the attack, but also what should be done in the intervals. During the attack, narcotics, either alone or associated with antispasmodics or stimulants, must be given. I cannot, of course, specify any particular one, because what may be found useful in one case may be of no avail in another. Absolute rest in bed is essential, together with warm applications to the pelvic region, combined with some narcotic: in some cases hot baths will be of service.

The treatment during the interval will be regulated either by the nature of the disease of which the dysmenorrhœa is a symptom, or by the constitutional condition of the patient, and consequently may comprise a variety of therapeutic agents, which it is not necessary I should enumerate. I should, however, mention that among the best constitutional remedies is that known by the term *hydrotherapeia*, which answers very well with many women suffering from uterine affections who need increased strength and the quieting of their nervous system.

In the same manner, out-door walking and other exercises indulged every day have an undoubtedly beneficial effect in all forms of nervous dysmenorrhœa, especially in the strong and robust. Among these, particularly when the disease is hereditary, it is sometimes advisable to recommend early marriage; for conception, which completely changes the vitality of the uterus—often removes altogether these menstrual troubles; whereas if marriage be delayed very long, the frequent occurrence of these attacks may bring about such organic alterations as may lead to sterility, and so perpetuate these troubles up to middle age.

I should, however, mention that this danger is less to be dreaded in cases of nervous dysmenorrhœa than in the other variety of our seventh class, viz., where menstrual retention results from a sudden interruption of the period either from mental emotion or some physical disturbance, because in these cases morbid reaction on the peritoneum is of much greater frequency. When the suppression occurs at the close of a menstrual period, and the complications are not severe, we may content ourselves with the exhibition of diaphoretic and stimulating drinks, warm emollient poultices to the stomach, rubefacients to the extremities, hot baths, and patience

till the succeeding period. This is the more necessary where there is any doubt as to the veracity of the patient's statement.

But when the peritoneum is involved we cannot thus temporise, for then we have to combat inflammation resulting from the retention; as long as it continues it will prevent the re-establishment of the function, and the escape of that fluid whose retention was the original cause of the disturbance. The best mode of accomplishing this is to apply leeches freely to the lower part of the abdomen, which, by moderating the peritonitis and diminishing the congestion of the generative organs, renders excretion possible, as happened in the following case, which M. Descroizilles read before the Medical Society of Observation in January, 1860. The case is so interesting that I cannot resist quoting it; it seems, indeed, exactly to illustrate many of the points discussed in this chapter, and proves at the same time that my facts are not exceptional.

Case L.—*Menstrual suppression from the insertion of a sponge into the vagina; severe abdominal and iliac pains three hours after; aggravation of the symptoms on the third day; swelling in the anterior* cul-de-sac *and left broad ligament; cervix uteri closed; twenty-five leeches applied; general improvement and return of the menstrual flow; rapid recovery.*

M. R., aged 23, was admitted November 5th, 1859, into *la Charité*, under the care of M. Nonat. She began to menstruate normally at 14—always rather scanty, but quite regular; she was pregnant at 21; labour natural, followed on the second day by suppression of the lochia from fright; great pain and vomiting succeeded, with abdominal distension, which increased during the following days. On the fifteenth day, the midwife under whose care she was, finding that she did not improve under purgative and emollient remedies, brought her to the *Beaujon* Hospital, where she was admitted under the care of M. Goupil.

On examination there was found to be great enlargement of the cervix, with a good deal of deposit all round, especially on the right side. The leg of that side also could not be straightened. Suppuration followed, and the abscess burst, discharging its contents both by the vagina and rectum. Flying blisters, emollient poultices, and mercurial inunctions were resorted to, and against advice she left the Hospital. She returned, however, in a little while. In about three weeks she recovered and left the Hospital again, but the periods were

both more profuse and more painful than before the last pregnancy.

She continued well until the 2nd of November, when, anxious to indulge in sexual intercourse, she introduced a piece of sponge into the vagina, in order to arrest the menstrual secretion. She obtained the desired result, but two or three hours after she was seized with violent rigors, fever, extreme pain in the iliac fossæ, nausea, headache, and vertigo. She took to bed, and three days after was admitted into *la Charité*. The examination *per vaginam* was so extremely painful that the position of the uterus could not be made out, except that it was pushed backwards by a swelling in front. Pulse 90. Twenty-five leeches were applied, fifteen to the left and ten to the right iliac fossa.

On November the 6th she was better, and some menstrual discharge came on. On the 8th she had a return of pain, for which fifteen leeches were applied. On the 10th she could bear an examination, when the uterus was found to be retroflexed, and there was still a slight swelling in front of it. This greatly diminished by the 20th, and as she continued to improve she was discharged from the Hospital on the 12th of December.

After the long discussion which I have given to the subject of accidents arising from menstrual retention, it is unnecessary for me to add any remarks on the above case. I may therefore resume the general consideration of treatment at the point where I left it.

In the application of leeches we ought always to restrict the number to the lowest possible consistent with the intensity of the inflammation; and when, as sometimes happens, their employment brings on the menstrual secretion, we should then favour the discharge by absolute rest in bed, by warm emollient applications to the abdomen, and by hot slightly stimulating drinks. The effect of these remedies sometimes is to produce a rather more than usual amount of loss, due partly to the expulsion of the retained menses, and partly to a slight metrorrhagia. As a rule, however, the result is rather beneficial than otherwise. It tends to diminish the uterine congestion, which is always an accompaniment of this condition, and may safely be favoured rather than checked. If the case has not been very serious, the cessation of the hæmorrhage brings with it a return of health. Still, the greatest care will be necessary for some time, and especially at the next menstrual period, which, if free and

regular—perhaps a little in excess of what is usual—will very likely dispel the last remaining trace of the affection.

If the symptoms, instead of being thus light, are more severe—if, after the cessation of the discharge of blood, abdominal pains remain, and with them pain and tenderness in the lateral vaginal *culs-de-sac*, with more or less swelling in those regions—then the treatment must be more severe. Rest in bed, if not absolute, at least as much so as possible, for this is perhaps the most important prescription, while it is often the most painful to patients; hot emollient applications, poultices, and injections, until the return of the following menstrual period. If then the pains return, we must without further delay apply leeches to the cervix and endeavour to secure a free discharge, which will most likely, as before, though less speedily, lead to the cure of the patient.

But I must here add a remark which it is important to bear in mind: when I speak of the extraction of blood, and especially of applying leeches to the cervix, which, though few in number, afford a more satisfactory local depletion than that which follows from the application of a much larger number in any other part, it should be remembered that in the treatment of female diseases we should be very reserved in the employment of depletion, and only use it when rigorously demanded. I do not mean that we should not resort to it freely in cases of severe peritonitis, or where we have a well-grounded fear of its supervention. The indication under such circumstances is very clear; but inasmuch as menstrual peritonitis quickly recovers, it is rarely necessary to have recourse to leeches again until the following period, unless they are thought to be called for by any slight return of pain, or by any act of indiscretion on the part of the patient, such as that referred to in the preceding case.

I shall not dwell on this point further than to remark that, of course, the reparative process is more quickly performed in persons of good constitution than in those already enfeebled. This fact has an important bearing in reference to the treatment; especially as to the need of affording support rather than depleting, when the serous inflammation has led to the formation of false membranes. In like manner it is important to exhibit a good nutritious diet, and as soon as the first improvement has taken place to allow a certain quantity of Bordeaux and quinine wine. We must remember the precept, "*Sanguis spasmos solvit.*" Thus we shall not only spare the patient pain, but also any relapse of inflammation, which in the case

of cachetic persons occurs often from very slight causes, such as would be powerless in women of good constitutions.

The remarks now made indicate my opinion as to the value of the derivative bleedings which formed a part of the complex treatment recommended by Lisfranc for all kinds of uterine affections; as well as that of the small revulsive bleedings practised by Nonat, which, though I willingly allow that they do at first afford temporary improvement, due probably to the sort of disturbing influence which they exercise, yet they must necessarily weaken the patient, and if repeated, will produce an anæmic cachexia which certainly perpetuates the mischief. I must confess that I reject the employment of blood-letting in menstrual peritonitis when this is the result of hæmorrhage into the peritoneal cavity. In the acute stage which supervenes immediately on the escape of blood into the abdomen, we should cover the lower part of the body with a certain number of leeches, and favour their bleeding by the employment of large but thin and hot poultices, either simply emollient, or combined with laudanum, the use of which must be continued for some time, either alone or associated with unctions of a thin layer of Neapolitan ointment. During this acute period baths, which are useful in a later stage of this affection, though they are injurious in true menorrhagia, are contraindicated, for the reason that they compel the patient to move about when she ought to be perfectly quiet and in such a position that the abdominal walls may be in the most complete relaxation and the respiration easy. With the same view, we should endeavour to prevent vomiting by abstaining from drinks, by giving the patient a few slices of lemon to keep in the mouth, by the employment of ice in small pieces, small quantities of Seltzer water, or better still, by the administration of teaspoonfuls of the anti-emetic drink of Rivière.

But these means are often insufficient. When the vomiting is frequent, and especially when the peritonitis assumes a choleraic form, we must then have recourse to large doses of opium. At the same time, we must endeavour to moderate the intestinal flux by small repeated enemas, containing almost as much laudanum as water, so that they may be retained, and to administer by the mouth, either the laudanum of Sydenham, or the extract of opium, given in pill of $\frac{1}{20}$ of a grain every hour night and day, to narcotism. After the opium thus administered aided, perhaps, by the application to the epigastrium of a large blister, the surface being afterwards smeared with

hydrochlorate of morphia, has checked the intestinal flux, and it generally at this period yields very easily to treatment; then, if the vomiting remains intractable after the other symptoms have subsided, we must have recourse either to belladonna or strychnia. In some cases I have succeeded with opium, in others with belladonna pushed to narcotism, and in a still larger number with strychnia, given in very minute and gradually increasing doses, administered in coffee every half hour. But I confess I have not been able to determine beforehand in what cases opium would fail, nor when we ought to substitute for it strychnia rather than belladonna to check the vomiting which seriously aggravates the condition of the patient. It is very important that under these circumstances we should, as much as possible, avoid examining the patient, as it often increases the vomiting. It is not necessary that I should insist on this, because every practitioner who watches these cases, will be struck by the evil results of frequent examinations, both in the acute and chronic stages.

There are certain indications to be attended to when the acute stage has subsided, for I do not agree with the opinion of some of my colleagues, and especially with M. Oulmont,* that we should be content with a merely expectant plan of treatment. I entirely reject the absolute expectant rule of M. Oulmont, because such a rule is only applicable, if at all, to the treatment of hæmatocele as a disease, instead of which it is merely a symptom of another disease.

It will be seen then, that if the expectant plan be not really injurious, it is at least useless, because it fulfils none of the indications which are presented by the different varieties of an affection which, far from being indiopathic, is but a symptom of other diseases; a fact which my colleague has entirely overlooked. In opposition to his opinion, therefore, I would recommend, in common with my friend M. Aran,† the application of leeches in those cases where bleeding is not contraindicated, which it is in cases of menorrhagic hæmatocele. I think they are especially applicable in the class of cases we are now considering, viz., hæmatocele from menstrual retention, in order to hasten the absorption of the blood-clot. In my judgment, the more

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* Oulmont. *Bulletin de la Société de médecine dès hôpitaux de Paris*, t. iv., nº. 1., p. 35.

† Aran. *Bulletins de la Société médicale des hôpitaux, loc. cit.*, p. 35.

rapid absorption of the clot under the influence of leeching is a certainty. I believe that if M. Oulmont denies it theoretically, it is because he forgets that these bleedings in favouring the resolution of the chronic peritonitis, place the walls of the peritoneal cyst in the most favourable condition for the absorption of the contained clot; moreover, had he employed this method of treatment and witnessed the diminution in the size of the tumour which follows, he would then have had no doubt of its efficacy. I do not recommend this indiscriminately in all cases, nor do I, as M. Aran advises, advocate the application of many leeches, repeated day by day in diminishing numbers, perhaps for eight or ten days. I only prescribe them in individual cases when they seem to me necessary. My plan is simply this: in women who are not much debilitated, I apply four or six leeches to the cervix, two or three days after the remission of the more acute symptoms; and in two or three days more, supposing there is any acute sensibility to pressure over the hypogastrium, or on a vaginal examination, I repeat the application. I then wait till the following menstrual period before having recourse to it again, and then on the very first appearance of pain indicative of the catamenial epoch, I apply leeches to the cervix in order both to relax the orifice and, if possible, to determine the escape of the contained fluid. If this takes place, absorption of the intra-peritoneal effusion will most likely follow rapidly.

I need not say that we must of course favour the menstrual discharge by every appropriate means, in order that its escape may be complete; when that is obtained, we must keep the patient in perfect rest in bed during a certain time. We must continue the baths and poultices, and use various agents to remedy the constipation which exists not only during the continuance of the hæmatocele, but often also after its absorption, owing to the adhesions which bind the rectum and sigmoid flexure together.*

There is one very important point to which I must refer, namely, the dietary of patients affected with hæmatocele, especially during the reparative process. It has appeared to me prejudicial to keep them on any severe diet: therefore, as soon as the fever has fallen, and even before the vomitings have entirely ceased, I allow the patient at first cold broths, and oysters; then some grilled or roast meat,

* J. Cossy. *Mémoires de la Société médicale d'observation*, t. iii. p. 50 et suiv.

and a certain amount of Bordeaux wine, or wine of quinine; in fact a diet at once nutritious and reparative, and at the same time easily digested and otherwise disposed of. It appears to me useless to discuss the fitness of this diet, not only because there is nothing in hæmatoceles which indicates the *cura famis*, but also because the fear of making these patients anæmic by blood-letting has been the only serious objection which my hospital colleagues have had against the employment of leeches, during the chronic period of the affection; they dread, as I do, lest the constitution of the patient might not suffice for the work of reparation, which is of course conducted much quicker and better in healthy and strong, than in cachetic subjects.

When the inflammation is developed, which is to absorb the intra-peritoneal blood effusion, we must carefully watch the condition of the patient, to moderate the inflammation if it be excessive and threatens peritonitis, and avoid any untimely interference with the curative effort of the organism. When a fistulous opening is made we should favour the escape of blood by constant warm applications, particularly by the employment of warm enemas, often repeated, in cases where the hæmatocele has opened into the rectum, and this without any regard to the possibility of the escape of fæcal matter into the blood-cyst. This accident, notwithstanding the apprehensions expressed by M. Nelaton,* need not, I think, be dreaded if we consult the facts: it matters but little whether or no we admit the reason given by M. Dupuytren,† to explain this non-penetration, if no such case has occurred. It follows from this, that I decline altogether having recourse to the knife for the purpose of enlarging the opening and enucleating by force the entire blood-clot, as was done by M. Denonvilliers in the case which he published,‡ and which proves that this surgical interference may be immediately followed by a fatal result.

We have thus but to favour the expulsion of liquid and clotty blood, and to moderate the diarrhœa or dysentery which accompanies it when this is at all excessive, and especially when the inflammation of the rectum, developed by contiguity, gives rise to very painful tenesmus. We must remember, however, that there is no question of true

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* Voisin. *Loc. cit.*, p. 55.
† Dupuytren. *Leçons orales*, t. iii. p. 335.
‡ Case XXVI.

dysentery, and that emollients or gentle narcotics, to which we may sometimes add a few doses of diascordium or theriaca, suffice in general to check the intestinal flux, though, when it is moderate it favours rather than otherwise the expulsion of the clots.

We need not be anxious except when long-continued suffering, or suppurative inflammation of the cyst has greatly enfeebled the patient, and when, owing to this lowering of the constitution, the intestinal flux assumes the characters of colliquative diarrhœa.

I shall not stay to describe the conduct of the practitioner under such sad circumstances. Desperate as the case may appear, there is still some chance of recovery: but of course the closest surveillance of the patient's condition is necessary in order to combat symptoms which may arise from extreme debility, and judiciously to administer such tonics or other means of support as the circumstances may require; these I need not enumerate, I will only remark that in the foremost rank I place cold soups, meat jellies and wine, all of which are generally better borne than drugs, which frequently nauseate and produce some effect contrary to that intended. In spite of all these means it is sometimes our painful lot to see patients fall into a state of collapse from which nothing restores them, in cases where either the cyst has not opened, or the opening is so placed that the pus or blood which it contains cannot escape. In some of the cases which have reached this stage puncture of the blood-cyst through the vagina would seem to be indicated, though, as may be seen in the table below,* this operation is not free from

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* Twenty-nine cases of hæmatocele treated by puncture,—22 recoveries, 7 deaths.

22 *Recoveries.*

1. Obs. de Jourel. Case XLVI.
2. Obs. de Récamier. Case XXXIV. and XXXV.
1. Obs. de M. Velpeau. Case XXXIX.
2. Obs. de M. Juteau, *Thèse de Viguès*, p. 49 and p. 52.
1. Obs. de M. Nélaton, *Thèse de Viguès*, p. 7.
1. Obs. de M. Nélaton, *Thèse de Voisin*, p. 94.
1. Obs. de MM. Dubois et Nélaton, citée par M. Voisin (*Traité de l'hématocèle.* Paris 1860, p. 239).
1. Obs. de M. Maisonneuve, *Thèse de M. Fenerly*, p. 70.
1. Obs. de M. Robert, *Société de chirurgie, Gazette des hôpitaux, juillet*, 1851.
1. Obs. de M. Marotte, *id.*
1. Obs. de M. Oulmont, *Thèse de Voisin*, p. 78.

danger. I do not, however, attach much importance to this table, because it comprises cases very dissimilar and in many of them the conditions under which the operations were performed are not specified. I therefore adhere to the opinion previously given, that we ought not to puncture hæmatoceles except in extreme cases, as when the condition of the patient leads to the belief that the cyst has inflamed, and contains pus as well as blood, the spontaneous expulsion of which cannot take place. This opinion is now generally accepted.* It is right that I should specify the reasons why this is so dangerous an operation, that it is fatal in nearly one quarter of the cases, and is followed by severe complications in some of those which recover,† inasmuch as the authority of the advocates of Récamier's‡ practice has been strengthened by that of M. Nélaton,§ though he, it is true, has since restricted its employment to certain specified cases.‖

The first reason is that all surgical interference with blood effusions, even when subcutaneous, causes such serious disturbance that the principle of excluding as far as possible the admission of air into blood cavities is well established. Consequently the puncture of a hæmatocele ought to be regarded as a terrible operation even by those who hold that they may be seated in the peri-uterine cellular tissue.

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1. Obs. de M. Barthez, *Bulletins de la Société médicale des hôpitaux, avril*, 1859, p. 36.
3. Obs. de M. Nonat, *Traité des maladies de l'utérus.* Paris, 1860, p. 869, 870, 872.
1. Obs. de M. Tilt, *Diseases of Women.* London, 1853, p. 261.
4. Obs. de M. West, *Diseases of Women.* London, 1858, p. 456.

7 *Cases of Death.*

1. Obs. de M. Malgaigne, *reported in note*, p. 117.
1. Obs. de M. Denonvilliers, Case XXXVI.
1. Obs. de M. Mikschick, Case XLV.
1. Obs. de M. Besnier, Case XXXI.
1. Obs. de M. Piogey, *Thèse de Viguès*, p. 26.
1. Obs. de M. Voillemier, *Thèse de Voisin*, p. 98.
1. Obs. de M. Monod, *Société de chirurgie*, 1851, *loc. cit.*

* *Bulletins de la Société médicale des hôpitaux, loc. cit.*

† Obs. XLVI., de M. Oulmont, *Thèse de Voisin*, p. 78. Obs. de Dr. West, *loc. cit.*, p. 456.

‡ Bourdon, *loc. cit.*, p. 67.

§ Nélaton. *Leçons faites à l'hôpital S. Louis* (*Gazette des hôpitaux, fevr*, 1851).

‖ Voisin, *Thèse inaugurale*, p. 72.

The second reason is, that though some of these blood tumours are extra-peritoneal, as I shall show in the next Part, the majority of them are situated in the pelvic cavity. This circumstance, of which Récamier was ignorant, renders the prognosis of puncture much more serious than if the effusion were generally external to the peritoneum. These two reasons are in my estimation so weighty that I have rejected the idea of puncture even when it has seemed to be most called for. Nor can I refrain from asking how so judicious a surgeon as M. Nélaton could inaugurate his teaching at the Faculty by such a violation of one of the best established maxims of surgery.

The third reason is, that for this operation to be successful as regards the evacuation of the effused blood, either it must be performed at the most dangerous period when the blood is recently effused, and therefore still fluid, or, if performed at a later period the opening made must be a large one, as in Case XXXVI. of M. Denonvilliers, the coagulum being extracted by means of a scoop, and that too from a cavity attached to the peritoneum. Lastly, the peritoneal cavity and that of the cyst being one, and continuous with that of the vagina, air is allowed free access to the former, while closure of the latter cannot take place but by free suppuration, a condition which, considering the close contiguity of the serous membrane, cannot be other than dangerous.

All these circumstances, which are almost as dangerous in extra- as in intra-peritoneal hæmatocele, show the extreme danger of puncturing, and prove that we ought not to have recourse to it except as a last resource. It is unnecessary to describe the steps of the operation as they are so extremely simple; but I may state that good may result from injecting the cyst with warm water or iodine, for a few days after the operation. This proceeding was resorted to in six of the cases which recovered, and with evident advantage.* But the greatest care is necessary to avoid those accidents which I shall point out in the chapters on Pelvi-peritonitis, as likely to lead to a fatal termination. Unfortunately, it is very rarely that we shall effect a cure by these operative measures, no matter how careful we are; but at the same time one successful case will compensate for many reverses, seeing that it is only resorted to in desperate cases.

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* Bourdon, *loc. cit.*, 2. Velpeau, *loc. cit.* 1. Nonat, *loc. cit.* 3.

The serious character of the results attending the puncture of hæmatocele, shows pretty clearly the undesirability of resorting to such a proceeding in those cases which constitute our eighth variety, viz., cases of congenital or acquired imperforation of the ostium uterinum of the Fallopian tubes, seeing that the dangers of surgical interference would not even be counterbalanced by the chance of a lasting benefit. In the present state of our knowledge of these cases it is impossible to attempt anything in the way of cure. All we can do is to combat symptoms as they arise, and to second the curative efforts of the organism. This may be brought about either by the premature abolition of the generative function, as in the case of M. Menière,* or by the production of a genito-rectal fistula, as in Case XLIX. These two cases demonstrate conclusively that in doubtful cases the wisest course to pursue is to abstain from all rash attempts. The treatment should be adapted to the symptoms, and the vital power of the patient must be sustained as much as possible, in the hope that a spontaneous rupture of the cyst, either into the rectum or the vagina, may take place, and thus a permanent fistula be established which may serve each month as a canal of exit for the tubo-ovarian menstrual product. But this kind of do-nothing advice which seems to me the most fitting in the present day, does not hold good under circumstances where the retro-uterine blood-cyst has become the seat of a purulent collection. We ought then certainly to puncture, and endeavour afterwards to maintain a fistulous opening. All such cases should be carefully collected and published; they are important on their own account, and also for the light which they throw on the general history of hæmatocele: a subject which will be considered in the following pages.

* Obs. xxxiii. Also case reported by M. Huguier, *Bulletins de la Société de chirurgie*, mai, 1856.

PART II.

PERI-UTERINE HÆMATOCELE.

GENERAL OBSERVATIONS.

In the preceding Part I have dwelt at some length on the severity of the evils which may, under certain circumstances, accrue from menstrual retention, where the blood secreted from the generative organs finds its way into the peritoneal cavity, sets up peritonitis, and gives rise to an intra-pelvic blood tumour, which, since the publication of my memoir,* has received the name of *retro-uterine hæmatocele*.† The date of that publication, the long explanations entered into for the purpose of showing the relation which exists between that form of intra-pelvic hæmorrhage and menstruation,‡ and lastly, the trouble I have taken to prove that certain pelvic tumours originate in a disturbance of the catamenial function, and are the remains of former menstrual extravasations,§ might certainly have constituted a prior claim to the merit of having discovered hæmatoceles. But in reality I make no pretension to that discovery, the merit of which, as I stated in 1848,‖ belongs entirely

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* G. Bernutz (1848). *Mémoire sur les accidents produits par la rétention du flux menstruel* (*Archives générales de médecine*, juin, août, décembre, 1848; février, 1849, 4e série xvii. p. 129 et 433; t. xviii. p. 405 et t. xix. p. 186).

† Nélaton (1851). *Leçons orales faites à l'hôpital des Cliniques et recueillies par MM. Baucher et Gaillet, internes du service* (*Gazette des hôpitaux*, 11, 13, 16 décembre, 1851; 29 janvier et 10 février, 1852).

‡ G. Bernutz, t. xvii. p. 148 et suiv.

§ *Id.*, p. 151.

‖ *Id.*, p. 150.

to Ruysch,* and since 1691, it has never been entirely forgotten :† lately it has been described in the clearest manner in a work so classical that every educated practitioner ought to have seen it.‡ But

* To Ruysch (1691) undoubtedly belongs the honour of having first mentioned the escape of menstrual blood into the peritoneum (*Observationum Anatomico-chirurgicarum centuria.* Obs. LXXXV., p. 110, edit. d'Amsterdam, 1691.) In the preceding Part I. inserted this case, which, at the date is the only one of Ruysch's cases which has been republished by the Leipsick authorities (Acta eruditorum, t. x. p. 69.) in their account of his works.

To M. H. Bourdon (1841) belongs the credit of having first described the physical signs of those blood tumours now called hæmatoceles, which he thought were situate in the peri-uterine cellular tissue, but whose relation to menstrual irregularity he entirely ignored. *Mémoire sur les tumeurs fluctuantes du petit bassin.* (*Revue médicale*, juillet, août, septembre, 1841). I have included in the foregoing pages, the two cases of hæmatocele reported by M. Bourdon, Cases XXXIV., XXXV.

M. Velpeau (1843) had the honour of first diagnosing during life one of these blood tumours, without having recourse to an exploratory incision, though he did not recognise its exact situation nor its relation to menstrual disturbance. *Recherches anatomiques, etc., sur les cavités closes* (*Annales de la chirurgie française et étrangère*, t. vii. p. 430. Paris, 1843). This case is also reported, Case XXXIX.

I may perhaps be allowed to state that :—

1st. No one can claim to have preceded me in pointing out the relation which exists between these blood effusions now called hæmatoceles and disturbances of menstruation. I have also guarded myself against attributing them to any common origin from one and the same lesion, t. xvii. p. 149.

2nd. That hardly any addition has been made to the anatomico-pathological description of hæmatoceles which I first sketched out, t. xvii. p. 140.

3rd. That even now, I have reproduced exactly the same morbid picture as characteristic of the escape of menstrual blood into the pelvic cavity, and have copied almost identically the account first traced of hæmorrhagic peritonitis, t. xviii. p. 416.

4th. That I have not yet completed the indications which I gave of the changes that the effused blood undergoes in the peritoneum : these I reserved in 1848 to describe when I should be able to collect sufficient material for the purpose (t. xvii. p. 152, t. xviii. p. 410). M. Velpeau has, however, forestalled me in this matter, *loc. cit.*, *et Médec. opérat.* t. iv. p. 350, 2e edition, 1839.

† M. Schurgius. *Muliebria historico-medica*, sect. 3. ch. iv. *De tubis Fallopianis*, p. 380. Dresde et Leipsick, 1729.

‡ J. P. Frank, t. ii. p. 267. Edition française avec préface de Double. Paris, 1842.

I may at all events claim the merit of having shown the real value of Ruysch's discovery, and my remarks have formed the groundwork of all the recent works on hæmatocele; notwithstanding the silence of M. Nélaton,* who, until lately, made no mention of my work, though he quoted from it largely in his lectures on hæmatocele.†

I shall not stay to point out that the bloody tumour which is left as the remains of a hæmorrhage has no right to be regarded as a specific disease, apart from that which caused it. It seems unlikely, indeed, that any physician would so regard it. Therefore the question is simplified into this—What are the various causes of hæmorrhage within the pelvis?—the hæmorrhage itself being regarded merely as a symptomatic expression of those morbid conditions.

This, which was the leading idea of my original memoir of 1848,‡ will form a prominent feature in the present work; and in spite of the criticism to which I have been exposed, because I do not admit that every hæmatocele without exception is purely and simply an extra-uterine ovulation,§ without any pathological cause,‖ I shall persist in the alleged error of my medical faith. Instead of grouping together in one and the same category, as M. Nélaton and his assistants have done, facts so dissimilar as extra-uterine pregnancies, congenital imperforations, menstrual retentions, metrorrhagias of all kinds, ruptures of aneurisms, and tubo-ovarian varices, with cases of hæmorrhagic peritonitis, and even thrombus, and giving to this irrational fusion the name of one disease,¶ I shall endeavour, on the contrary, to differentiate the several varieties of these blood effusions, the pathological relations of which it is important to recognise. But in

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* Nélaton. *Leçons orales faites à l'hôpital S. Louis* (*Gaz. des hôp.*, fevrier, 1851). *Id. Leçons orales faites à l'hôpital des Cliniques* (*Ib.* dec., 1851, 1852).

† Nélaton. *Leçons orales faites à l'hôpital des Cliniques.*

‡ G. Bernutz, *loc. cit.*, t. xvii. p. 131.

§ Gallard. *Théorie de l'hématocèle* (*Gaz. hebdom.*, 1858, p. 461).

‖ The clot of blood which is detached from the ovary at a normal ovulation does not exceed a few drops, how then can we attribute to an extra-uterine ovulation tumours as large as a fœtal head, such as are met with in most cases of hæmatocele?

¶ Fenerly et Voisin, *loc. cit.*

order to arrive at this very important distinction, it seems to me indispensable briefly to recall to mind a few of the anatomical relations of the female generative organs, and to compare them with their homologues in man, inasmuch as these anatomical analogies are reflected in their pathology, and will render my task an easier one hereafter.

Considered in reference to our subject, the two principal differences between the analogous generative organs in the male and female have reference to the intra-abdominal situation of the female testicle, and to the necessary mobility of its epididymis (the fimbriated extremity of the tube*), in order that it may, at the menstrual epoch, apply itself to the different points of the surface of the ovary which are successively the seat of ovulation.†

Owing to the intra-abdominal position of the ovary, the part of the peritoneum, which in man is drawn out externally by the two testicles, remains, on the contrary, in the female, to cover a certain portion of the pelvic cavity, and thus forms a considerable part of the utero-rectal *cul-de-sac*, which for this reason may be legitimately regarded as the analogue of the double tunica vaginalis in the male. This anatomical analogy, which I have already pointed out in another work,‡ limits the term hæmatocele, which was applied by M. Nelaton§ to retro-uterine blood tumours, to a more restricted signification than that which he assigned to it. We may, for instance, as in the case of hydrocele, confine the term hæmatocele exclusively to effusions of blood which occupy the tunica vaginalis, the pathological history of which exhibits many points of resemblance to that of the analogous affection in the other sex. I must insist upon the very great advantage of this limitation of the term hæmatocele, because it allows us to separate from the history of this affection effusions of blood into the broad ligaments, and into the

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* Postello, *Medicinæ in Academia Cadonensi professor* (*Acta eruditorum*, t. iii. p. 40. Leipsick, 1692).

† I am not now concerned with the mechanism of that process. On this subject consult the work of M. G. Rouget, *Recherches sur les organes érectiles de la femme, etc. Journal de la physiologie de l'homme et des animaux*, t. 1er, nos. 2 et 3. Paris, 1858.

‡ G. Bernutz et E. Goupil. *Recherches cliniques sur les phlegmons péri-utérine* (*Arch. gén. de médecine*, mars, 1857, p. 14). Lacourtiade, *Thèse inaugurale*, Paris, no. 177, 1858.

§ Nélaton. *Leçons orales faites à l'hôpital Cliniques, loc. cit.*

sub-vaginal cellular tissue; these are entirely unlike intra-peritoneal hæmorrhages, which may be grouped with bloody infiltrations of the scrotum, to which they are very analogous. This restriction of the term hæmatocele enables me also to eliminate cases of the spurious extra-peritoneal variety, of which not one single undoubted example exists; except, at least, those connected with gestation and the puerperal state: this may be seen by reference to the cases mentioned below.* It enables us also to give to those cases where the effusion of blood occupies the sub-peritoneal cellular tissue, and which belong entirely to the puerperal state, the title of *thrombus*, a name which they received at the time of their publication, and which they deserve to retain. In fact, in reading them, one is astonished that those who reported them, especially M. Puech,† to whose ability I can bear witness, should not have given more examples. It is sufficient to open the remarkable work of M. Deneux on bloody tumours of the vulva and vagina,‡ the *Traité de tocologie* of Professor Velpeau,§ or the thesis of M. Blot,‖ in order to find

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* These are eight in number. Four have been recently published by Nonat. Case LXXXVIII., LXXXIX., XC., XCI., p. 867, *loc. cit.* Two occur in the thesis of M. Vigués, Case II., III., p. 21. One was reported by M. Robert at the *Société de chirurgie* 1855, *Bulletin*, p. 345. And one was described by Silvestre, and published in the thesis of M. Voisin, Case VIII. p. 98.

The four cases of M. Nonat all terminated successfully, and cannot be considered as absolutely certain because, notwithstanding the authority of Nonat, there should have been at least one autopsy in order to demonstrate the legitimacy of the different diagnoses. It happened unfortunately, that the only patient affected with hæmatocele, whom M. Nonat lost, had an intra-peritoneal effusion of blood.

Of the two cases reported by Viguès, one certainly was an intra-peritoneal hæmatocele; that he himself admits now; the other, quoted from M. Piogey, appears to have been a case of utero-tubar gestation, though the particulars are wanting.

The same remark applies to M. Robert's case.

The case of M. Silvestre which I shall relate further on, is unquestionably a case of intra-peritoneal hæmorrhage, as has been pointed out by Voisin.

† Puech. *Loc. cit.*, pp. 83, 92, 93, and especially 95.

‡ Deneux. *Sur les tumeurs sanguines de la vulve et du vagin.* Paris, 1830.

§ Velpeau. *Thrombus.* (*Traité de tocologie*, 2e edit. Paris, 1835.)

‖ Blot. *Thèse de concours pour l'agrégation: Des tumeurs sanguines de la vulve et du vagin pendant la grossesse et l'accouchement.* Paris, 1853.

other cases in which the title of thrombus would be as legitimately, or rather as illegitimately, converted into that of extra-peritoneal hæmatocele, as was done in the two cases mentioned below.*

But to return to our anatomical examination and comparison of the tunica vaginalis in the two sexes. At first sight there seems a great dissimilarity, inasmuch as the double tunica in the female, instead of being a closed sac, is only a simple *cul-de-sac,* freely open at its upper part with the entire abdominal cavity, so that in the female a hæmorrhage, coming either from the abdominal wall, or from one of the abdominal organs, may fall down into the utero-rectal *cul-de-sac,* and there form an effusion, which, by its situation, would seem to deserve the name of hæmatocele, while its origin, on the contrary, would negative it. This exclusion seems to me necessary, not only in order to simplify as much as possible the subject of our study, but also to avoid calling that hæmatocele in a female which in a male would go by some other name, though they are essentially the same diseases in both sexes.

This opinion, which M. Trousseau accepts,† is so very generally

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* Obs. de Chaussier. *Recueil de mémoires, consultations et rapports sur divers objets de médecine légale,* p. 397. Paris, 1824.

A woman aged 30, in the fifth month of her fourth pregnancy, was riding in a cart, the shaking of which gave her great pain, especially in the right side, soon after she felt faint, had cold sweats and died quietly in three hours. On making *post-mortem* examination, the uterus was found pregnant at about the fifth month. At the lower and left side of the abdomen, *under the peritoneum.* a great quantity of black, partly fluid, partly solid, blood was infiltrated, forming a large long tumour, reaching from the right iliac fossa up to the kidney. It was evident that the blood had come from a rupture of one of the veins of the right ovary.

Obs. de Baudelocque, extraite du *Journal de Sédillot,* t. i. p. 472. 1796-1797.

A woman, the subject of rachitis, came for accouchment in the month of September, 1778. Pelvis measured two and a-half inches; the prolapse of the cord required immediate delivery. Forceps were tried and failed. Having been in labour twenty-two days, she was taken with sudden and severe hæmorrhage, but soon recovered from this; nine days after it was repeated, and she sank. On making a *post-mortem* examination, there was found an abscess in the right psoas muscle, and a considerable varix covered with bloody concretions, in the upper and anterior part of the vagina beside the cervix-uteri. No doubt the hæmorrhage which came on on the 22nd day of labour, like that on the 30th, proceeded from this varicose sac, and not from the uterus, as was at first thought.

† Trousseau. *Leçon clinique, Gazette des hôpitaux,* 22 juin, 1858.

adopted, that M. Voisin is afraid of being quite logical, for he avoids describing as a cause of hæmatocele wounds or diseases of the abdominal wall, though they may nevertheless, like aneurismal ruptures* or contusions of the abdominal walls by a blow or kick,† occasion a retro-uterine hæmatic tumour. For the same reason I exclude cases of rupture of an aneurism of the iliac artery, such as that reported by my friend Dr. Tilt.‡

It will be objected, perhaps, to the omissions which I propose, that it is difficult to distinguish during life between true hæmatoceles and such cases as that of Dr. Tilt. This objection is, however, groundless, because the difficulty or impossibility of making a differential diagnosis, even if it always existed, which I do not believe, could not justify the confounding of diseases, which at the *post-mortem* examination are proved to be entirely dissimilar. Still less could it be, when, as in Dr. Tilt's case, the difficulty of diagnosis depends upon the scanty data afforded by the patient as to her condition prior to the intra-pelvic hæmorrhage. These data are of such importance that the pathological relation sought to be established rests entirely upon them, and in very many instances the physical signs revealed by examination receive from them their true explanation. In like manner, as it seems to me, intra-pelvic hæmorrhages consequent upon extra-uterine gestation, should be eliminated from our category, because here the starting-point of the mischief is the pregnancy, not the blood effusion; no matter whether that results from the rupture of the fœtal cyst,§ or whether it arises from that generally congested condition of all the generative organs, which occurs in every case of abnormal gestation.

Regarding, therefore, intra-pelvic hæmorrhage symptomatic of pregnancy as an obstetical affection, I ought perhaps, as I did in the case of thrombus, to place these cases as notes (rather than in the text); but their great number, the difficulty of their diagnosis, and above all, the importance of distinguishing them from the several varieties of true hæmatocele, preclude the adoption of that course. I have therefore preferred to group them all together in a separate Part, which will form, as it were, an appendix to the history of

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* Voisin. *Loc. cit.*, p. 26.

† Voisin. *Loc. cit.*, p. 44.

‡ Case of Dr. Tilt. *Pathology and treatment of sanguineous pelvic tumours. Diseases of Women.* London, 1853. Case LXXIV. p. 260.

§ Aran. *Loc. cit.*, obs. xxii. p. 792.

true hæmatoceles, so that from the analysis of all these cases we may deduce a differential diagnosis of extra-uterine pregnancy; a condition which already offers so many difficulties.

Having eliminated these three varieties, it is necessary, in order to distinguish the several kinds of hæmatocele which I shall have to consider, to point out one remaining difference which the female tunica vaginalis presents as compared with that of the male. I refer to the habitual patency of the fimbriated extremity of the tube in this cavity. It is only during the time it is momentarily applied to the surface of the ovary, that the excretory canal is complete: while at other times, either from the simple fact of the distance, or by the accidental occurrence of a rupture, the continuity of the female epididymis with its testicle does not exist, or exists only imperfectly, and thus effusion of various physiological or morbid products, principally that of blood, is permitted to take place into the tunica vaginalis. Hence one large and important class of hæmatoceles are created simply by a defect in the relation of the tube to the ovary.

Another class is formed of those which are not dependent upon any solution of the continuity of the female deferent canal, and may therefore be considered as analogous to the different kinds of hæmatocele which occur in the tunica vaginalis of man.

This latter class, which are the true hæmatoceles, comprise two distinct varieties—1. Those arising from contusions; 2. Those from wounds (thrombus in the female, hæmatocele of the cellular tissue in the male).

In the one, the bloody exhalation is the result of a rupture of the utero-ovarian varicocele.

In the other, it is caused by a sanguineous exhalation from the tunica vaginalis. This condition deserves the name of *hæmorrhagic pelvi-peritonitis*, because the affection is, as regards the pelvic serous membrane, the analogue of that of the thorax, which was described by Laennec under the name of *hæmorrhagic pleurisy*.

Those hæmatoceles, which for the sake of brevity we may call feminine, to indicate that they occur exclusively in the female sex, may be divided into three kinds.

In the *first*, the extravasation of blood is symptomatic of a possibly local affection, as of the tube or ovary, which leads to the rupture of one or other of these organs, and the escape of blood into the pelvic cavity.

In the *second*, the effusion is owing to some defect of the

excretion. It is this which I have studied at length in the preceding Part.

In the *third*, which is the most interesting of all, as it is entirely medical, the hæmorrhage is caused by an exaggeration of the sanguineous exhalation which flows from the female genital organs, and results in a kind of morbid flux, which escapes either from all or part of those organs. This variety, which is characterised by the simultaneous escape of blood externally from the vagina, and internally into the pelvis, may occur under any of the circumstances which give rise to metrorrhagia, as will be shown in the chapters devoted to the consideration of these different varieties. Thus, we have met with instances of this kind in cases of metrorrhagia symptomatic of pregnancy,* of abortion,† of delivery at full term,‡ or during the course of fever,§ chlorosis, anæmia,‖ &c. The hæmatocele in these cases is not due to any error in the metrorrhagic flux, but is in fact regulated by the affection of which the metrorrhagia is a symptom.

In the brief summary which I have just given of hæmatoceles, it will be seen that I have made no allusion to the several theories which have been propounded at different times, and which, originating only in the observation of a few special cases, are not applicable to the general question. I shall, however, consider each of these theories in describing the various kinds of hæmatocele of which I have to speak.

1.—Hæmatocele symptomatic of rupture of utero-tubar varices.

In the first rank I place hæmatoceles symptomatic of rupture of veins, because this variety has been longest known to physicians, who, following the example of M. Nonat,¶ give to the term hæmatocele its etymological meaning, and apply it to all cases of blood effusion in the pelvis, without distinction either of cause or seat, and therefore include certain cases of thrombus, the first description

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* Obs. de M. Nonat. *Loc. cit.*, obs. lxxxvi. p. 863.
† Obs. de Barlow. *Arch. gén. de méd.*, 3 série, t. vii. p. 368.
‡ Obs. de M. West. *Diseases of Women*, p. 156. Londres, 1858.
§ Obs. de M. de Scanzoni. *Traduit française*, p. 312. Paris, 1858.
‖ Obs. de M. Trousseau, *Gazette des hôpitaux*, 22 juin, 1858.
¶ Nonat. *Loc. cit.*, p. 327.

of which dates, according to Deneux,* from 1734. The rupture of varicose veins of the genital organs, which since that time has been called thrombus, may, in the puerperal state, give rise to infiltrations of blood into the cellular tissue of the pelvis, and according to M. Nonat, these have received the name of extra-peritoneal peri-uterine hæmatoceles.† But rupture of veins may also give rise, under similar circumstances, to infiltrations of blood into the cellular tissue of the pelvis, and also to an intra-peritoneal effusion of blood, as in the case which I subjoin below.‡ Lastly, venous rupture may, ac-

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* Deneux. *Loc. cit.*, p. 2. *Dissertation inaugurale* de Jean Henri Kronauer: *De tumore genitalium sanguineo*, Basle, 1734 (*Réimpression du mémoire de Deneux*, 1835).

† Obs. de Chaussier, rapportée par Deneux, *loc. cit.*, p. 17. Obs. de Boer, rapportée par Deneux, *loc. cit.*, p. 32. Obs. de Chaussier, rapportée par Deneux, *loc. cit.*, p. 55. Obs. de Deneux, *loc. cit.*, p. 83. Obs. de M. Cazeaux, rapportée par M. Blot, *Thèse d'agrégation*, 1853, obs. vii. p. 29. Obs. de M. Depaul, rapportée par M. Blot, *loc. cit.*, obs. vii., bis, p. 109.

‡ Obs. de Baudelocque, rapportée par Deneux, *loc. cit.*, p. 169 :—

Enormous thrombus, symptoms of peritonitis. Incision. Death. Effusion of blood occupying the iliac fossa and extending into the mesentery.

A woman, aged 21, pregnant for the first time, was delivered naturally at the Maternity Hospital, Paris, August 1st, 1806, at midday. At 9 in the evening she complained of a painful sense of weight in the anus, accompanied by involuntary efforts at expulsion. It was then discovered on examination that it all arose from a tumour, which occupied all the right side of the vulva, and extended to the anus. It obstructed the discharge of the lochia from the vagina and of the urine from the urethra. Next day the abdomen began to swell and was very painful. The bladder was then emptied with a catheter. Emollient poultices were applied to the tumour, and injections to the vagina; the urine being drawn off night and morning. On the 3rd the tumour began to assume a livid gangrenous appearance; the abdomen became tender and painful, and the fundus uteri was high up. With all this, there was some constitutional disturbance; the tumour was accordingly opened and seen to be composed of coagulated blood. Very little fluid blood escaped, but as she seemed to get extremely prostrate, it was suspected that internal hæmorrhage was going on. The vagina was therefore plugged, and stimulants administered. All was however of no avail, the patient died seven hours after the incision.

On *post-mortem* examination, serous effusion was found in the peritoneal cavity. The mesentery was extensively ecchymosed, as were all the parts situate in the right iliac fossa. A large black clot was also found in the pelvic cavity.

"This case, which is now published for the first time, appears to me very curious for several reasons. The swelling did not come on till nine

cording to the bibliographical researches of M. Jacquiemer,* occasion simply an intra-peritoneal hæmorrhage. I shall not stay to consider either of these cases, all of which occurred during the puerperal state, because in them the venous rupture and the hæmorrhage resulting from it may be regarded as an accident of parturition, and it seems to me impossible, as I have said before, that the question of hæmatocele can ever be elucidated, unless we separately study those cases occurring during the pregnant and non-pregnant states. It is the latter only that I shall consider in this Part. Unfortunately, these cases are not very numerous: but two of them at least, which were published some time before the supposed discovery of hæmatocele, were thought by Ollivier (d'Angers),† in 1834, to warrant the following conclusions:—1. That the varicose dilatation of the pampiniform plexus may occur both during the pregnant and non-pregnant states, and 2. That this dilatation, when carried beyond certain limits, may lead to a rupture of one of the veins, and thus give rise to intra-pelvic hæmorrhage. The following are the two cases of venous rupture observed in the absence of pregnancy; and coupled with similar cases met with in the puerperal state, they led M. Ollivier (d'Angers) to lay down the preceding propositions. It is remarkable that they are not so much as mentioned in the Thesis of M. Devalz.‡

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hours after delivery, and its size increased so rapidly as to stop the flow of both lochia and urine, and rendered catheterism difficult. Peritonitis came on very speedily, and no doubt hastened death. This inflammation, of which I have recorded two examples, does not appear to me so frequent as Meissner suggests. The tumour was not opened till thirty-six hours after its first appearance, and hæmorrhage was still going on. The presence of a large clot in the pelvis proved that the tampon was not well applied; it was not carried high enough up, and perhaps the infiltration of the mesentery and iliac fossa was caused by the obstacle to the escape of blood externally. The tampon had been placed below the venous opening. But the deplorable condition in which the patient was at the time of opening the thrombus gave little hope of being able to save her."

* M. Jacquiemer. *Recherches d'anatomie, etc., sur l'uterus humain pendant la gestation, pour servir à l'histoire des hémorrhagies uterine* (*Arch. gén. de méd.*, 3e serie, t. v. p. 323).

† Ollivier (d'Angers). *Note sur un cas de grossesse tubaire, avec quelques observations sur une cause particulière d'hémorrhagie interne chez la femme* (*Arch. génér. de méd.*, 2e serie, 1834, t. v. p. 403).

* Devalz. *Thèse inaug.* (Paris, 1858): *Du varicocèle ovarien, et de son influence sur le développement de l'hematocèle rétro-uterine.*

CASE I.*—*Two previous pregnancies; rupture of the right varicose pampiniform plexus; death an hour and half afterwards from intra-peritoneal hæmorrhage.*

A lady, age 29, of usually robust health, mother of two children, after having exerted and fatigued herself a good deal in making preparations for a ball, was seized while dancing with sudden faintness; she was carried out of the room and placed on a bed, when in half-an-hour she died. On *post-mortem* examination, a large quantity of blood was found in the abdomen. All the abdominal organs were found healthy; except that in the pelvis it was discovered that the veins of the right pampiniform plexus were varicose and ruptured.

CASE II†—*Ill-defined hypogastric pains preceding pregnancy; excessive menstruation; menstruation retarded, followed by acute pain in the abdomen and symptoms of intra-abdominal hæmorrhage; death in five or six hours. Post-mortem examination; hæmorrhage from the left broad ligament.*

Mad. B., aged 28, of delicate constitution, for the last six years has felt above the left inguinal region heavy pains which she attributed to a blow received four years ago. Has had one natural labour. At that time she thought she had an ulcer of the womb, which, however, MM. Dubois and Boyer contradicted. With this she was satisfied till two months ago, when the abdominal pains returned. Six weeks ago she had menorrhagia, after which the pains increased. Her breasts and stomach began to swell, and she thought herself again pregnant. On the 9th of August, while carrying a heavy weight, a severe though momentary pain came on. The following day, she was suddenly seized with faintness, followed by severe colic, pulse became almost imperceptible, and she was covered with cold clammy sweat; pressure did not increase the abdominal pain; sickness and fainting continued, and in a few hours she died.

On opening the abdomen, a large quantity of blood was found. The abdominal viscera were healthy, but pale and exsanguine. The vena cava inferior was empty—the aorta very small. After searching for some time, the source of the extravasated blood was found in a circular ulceration of about one line in diameter, which appeared

* Ollivier (d'Angers), *loc. cit.*, p. 408. Extraite de *Gottfried Fleischman Leichenoffnungen.* Erlangen, 1815, in 8vo., p. 192.

† S. Leclerc. (*Arch. génér. de méd.*, 1re serie, 1828, t. 18, p. 281.)

in a tumour developed in the anterior wall of the left broad ligament. This tumour was about double the size of the ovary; it contained fibrinous clots—some red, others white; an *artery or vein* had opened into this cavity. The womb was just double its ordinary size.

These cases appear to me to establish beyond doubt not only that the tubo-ovarian veins may be in a varicose condition in the unimpregnated state, but also that they may burst and give rise to a hæmorrhage into the peritoneal cavity, which, under other circumstances than those which existed in the preceding cases, may, instead of causing immediate death, occasion symptoms characteristic of hæmatocele. These two cases, unfortunately, though of old standing, are still, so far as I know, the only two well-attested examples of this variety of intra-peritoneal hæmorrhage. So that this, which is given by M. Devalz* without any proof as the most frequent cause of hæmatocele, ought, if we only take account of well-observed cases, to be regarded as quite exceptional. I will not go so far as that, but will only remark that this variety is certainly rare, though I do not think it is possible in estimating its frequency to distinguish it from certain cases of intra-abdominal hæmorrhage dependent upon rupture of the veins of the broad ligaments, which have been briefly recorded by various authors, among others, by Professor Marjolin and M. Depaul.† The first of these cases I ought specially to mention. It is alluded to by Dr. Tilt ‡ in his very interesting *résumé* of the labours of French authorities on the subject of hæmatocele, and was probably described by Professor Marjolin in his lectures.

I shall not longer dwell on the fact that rupture of varices of the broad ligaments may originate intra-pelvic hæmorrhage, and thus give rise to a distinct variety of hæmatocele. It is a fact that was clearly pointed out by Ollivier (d'Angers)§, as the result of observation, and not of theory; it has been admitted, without doubt, by all observers who have followed him;‖ was considered in reference to

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* Devalz. *Thèse citée*, p. 30.

† Depaul. *Bulletins de la Société anatom. de Paris*, 1847, t. xxii. p. 15.

‡ Tilt. *Pathology and treatment of sanguineous pelvic tumours*, p. 262. *Diseases of Women*, 2nd edition, Churchill, London, 1853.

§ Ollivier (d'Angers). *Loc. cit.*, 1834.

‖ Marjolin. *Loc. cit.* Depaul. *Loc. cit.*, 1847.

hæmatoceles by Dr. Tilt* first, and afterwards by M. Richet,† and has now acquired a scientific status; and, what is of more importance still, it has had the sanction of time.

The difficulty of the question does not rest here, however: the essential point to determine is the character of the symptoms by which we may recognise at the bedside whether any given hæmatocele is to be attributed to a rupture of veins or to any other cause, and to deduce from them the treatment which is necessary. It was to this point that M. Richet, like myself, directed attention, in order to determine the indications of the existence of dilatation of the utero-ovarian veins, so as to render them more complete, and to give as a necessary complement the signs of varicocele in the female. This constitutes the really original part of the considerations which he offered on the subject. Unfortunately, the most important sign of varicocele pointed out by M. Richet‡ consists merely of a tumefaction of one or both of the broad ligaments, having certain special characters. We cannot, therefore, trust to it in diagnosis after the occur-

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* Tilt. *Loc. cit.*, 1853.

† Richet. *Traité d'anatomie médico-chirurgicale*, p. 735, 1re édit. Paris, 1857.

‡ Richet. *Loc. cit.*, 2e edit., 1860, p. 812.

"The following necroscopic appearances fitly illustrate the characters of these varicose tumours formed by the utero-ovarian plexuses when they have reached a great size. In a woman aged 46, mother of eight children, who died of cancer of the stomach, I found on opening the abdomen and examining the uterus, on each side of that organ, two round, soft, fluctuating tumours occupying the broad ligaments; that on the left side was much larger than the right, and drew down the upper border of the uterus. Both by the vagina and rectum, the finger detected on each side of the uterus a soft pasty feel rather than any distinct fluctuation. On attempting to raise the peritoneum covering these parts, in order to study its nature carefully, several of the bosses were torn and a considerable quantity of black blood flowed from the cellular tissue of the broad ligament. In spite of this I continued the dissection, and having uncovered the ovarian veins as far as the union with the left renal vein on that side, and on the right at the junction with the inferior vena cava, I observed that in pressing either on the thorax, the liver, or directly on the vena cava, the two tumours of the broad ligaments could be easily distended by the reflux of blood into the varicose veins. At that moment the finger introduced into the vagina detected this increased volume.

"The result of the dissection proved to me that the two tumours were exclusively formed by the ramifications of the enormously dilated utero-ovarian plexus; and here and there in the cellular tissue of the broad ligaments I found isolated apoplectic spots on the venous walls, the

rence of hæmatocele, because then all its special characters will be lost, and unless they have been demonstrated before the rupture, there is little chance of our being able to do so from any statement which the patient can give us. The same remark applies to periodical peri-uterine congestions, quoted by M. Richet as an element in diagnosis. We cannot really form any opinion of them unless they are accompanied by other symptoms of a more definite character. It is necessary, indeed, in order that the diagnosis may be rendered even probable, I do not say certain, because that seems to me impossible, that there should be, on the one hand, a number of direct and positive symptoms, and on the other the absence of any signs referring the hæmatocele to causes more common than that of rupture of a utero-ovarian varix. In a case which came under the care of my friend, M. Goupil, the only one of the kind that I have seen, notwithstanding that these two classes of symptoms existed, I yet maintained a certain reserve in adopting conclusions which the case nevertheless seemed fairly to warrant.

CASE III.*—*Marriage at* 18; *abortion at the sixth month; two labours at term, followed by metrorrhagia; ulceration of the cervix treated by cauterisations; varicose veins of the legs and right labium; hæmatocele two years after. Cure.*

J. J., aged 23, was admitted into *Hôtel Dieu*, April 27th, 1859, under the care of M. Goupil. She had been ailing about five weeks, but only severely for twelve or fourteen hours. She began to menstruate at 16, and has since been regular, without pain. She married at 18, and at once became pregnant, but aborted at the sixth month. She again became pregnant, and went to full term, and had subsequently a second child at the full period, two years ago, after this menstruation became abundant, lasting from eight to fifteen days, and even a month. She was then treated for

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formation of which, judging from the decoloration of the contained blood, appeared to be of long standing."

Obs., p. 813. "For several years past I have attended a lady, who had previously been under Amussat and Velpeau, in whom one can distinctly demonstrate some time before the appearance of menstruation, and still more immediately after its cessation, the presence of a soft fluctuating tumour on the left side of the vaginal *cul-de-sac*, a tumour which insensibly disappears after the lapse of a few days under the influence of rest in the horizontal position, and refrigerant applications."

* Reported by M. Durante.

ulceration, and for three months was cauterised every week; the periods afterwards being less profuse; still she suffered from pains in the loins, palpitations, headache, loss of appetite, constipation, with at times, diarrhœa.

A month before admission, she menstruated normally for eight days, at the end of which she caught cold, and had rigors, pains in the back, &c.; eight or ten days after, she was seized in the night with violent pain in the lower and left side of the abdomen, with shivering and fever. The abdomen swelled considerably, and she had incessant watery diarrhœa. A blister was applied and opiate injections, were used, the pains and diarrhœa gradually diminishing. Early in April menstruation came on naturally. She continued to improve up to the 25th, when, after a long walk, she was seized in the evening with excruciating abdominal pain, vomiting and diarrhœa. Being worse next day, she was admitted.

On admission, she was suffering extreme pain in the hypogastrium, the loins and thighs; that in the body was increased by even the least pressure; the belly was swollen and tympanitic above the umbilicus, while below it became gradually dull, till over the sub-pubic region it was quite dull. In the right iliac fossa there was a hard resisting tumour: in the left none. On examining the vagina, the finger entered with difficulty, owing to the engorgement of its walls. At an inch and a-half from the vulva was a hard, elastic, resisting, non-fluctuating tumour, bulging chiefly from behind, the size of a fœtal head, pushing towards the pubis and stretching quite across the pelvis. Above the tumour was situate the uterus, to reach which gave great pain. The vagina was not discoloured. The tumour in the iliac fossa was proved to be continuous with that of the vagina. There was diarrhœa, hot skin, pulse 110, varicose veins of the legs and of the right labia. On the 28th, a tumour was detected in the left iliac fossa, which was proved to be the distended and displaced bladder. She was ordered absolute rest, extract of opium, and emollient lavements. On the 29th, she had improved in most respects, and this continued for several days, the tumour remaining about the same. On the 17th of May, she was much better, the tumour evidently diminishing, and becoming less painful to the touch. On the 21st, it still occupied part of the posterior *cul-de-sac*, was hard, round, but not painful on pressure. On the 26th, it could not be felt in the hypogastric region, nor in the iliac fossa, but on the right side there was a resistance to deep pressure, which was caused by the uterus; no distinct tumour was

to be felt in the vagina, only some hardness in the posterior *cul-de-sac*, the remains of the large tumour which existed there fifteen days ago. *Per rectum* a swelling could only with difficulty be detected. With all this her general condition had greatly improved, and on the 2nd of June menstruation came on and lasted till the 11th. On the 12th, she left the Hospital. And on the 15th of July the following notes were made by M. Goupil :—

"Since she left the Hospital, she has performed some, though not all, of her ordinary duties, and she has occasionally had pain in the right iliac fossa; the veins in the legs have also got much worse and are more painful, especially on the right side, she notices that the former is worse than the latter. Sexual intercourse has not increased the pain. Menstruation has been regular. The varicose veins of the right labia extend up into the vagina. The cervix uteri is placed to the right of the vagina, and the fundus towards the right iliac fossa; the entire uterus is elongated to about four or four and a-half inches. No tumour can anywhere be felt."

In the remarks I am about to make on this case, I shall not touch upon the diagnosis of the recto-uterine tumour. Its peculiar shape, and notably its consistency, appeared both to M. Goupil and myself at the first examination to demonstrate its nature, so that notwithstanding the unusual circumstances under which it occurred, and which gave special interest to the case, we did not think it necessary to have recourse to the dangerous expedient of a puncture, in order to test the correctness of our opinion; the progress of the case proved that we were right, the extremely rapid absorption which reduced the tumour to about one-fifth of its former size in all directions, dispelled all doubt as to its being an intra-peritoneal blood tumour; this being so, the question is; What was the source of this hæmorrhage? remembering that the time of its occurrence was very unusual for a hæmatocele. It happened without any previous disturbance of menstruation, immediately after a long and fatiguing exertion, menstruation not being present at the time. It was clearly not caused by any suppression, nor by morbid menstrual flux, the absence of metrorrhagia at the time when the symptoms of hæmorrhagic peritonitis came on and the rapid cure of the patient, both alike forbid the idea that the hæmatocele was symptomatic of an affection of the genital organs, or of any disease which would have determined a morbid sanguineous exhalation of the utero-tubar mucous mem-

brane, a part of which would be diverted into the peritoneum, while the other part would flow by the vulva.

These facts establish beyond doubt, I think, that the hæmatocele in this case did not belong to either of my last classes, those which we may call catamenial. To what class, then, does it belong? To arrive at this, we must group together the leading features upon which the interpretation of the case seemed to me to be rendered, if not certain, at least probable, though the elements of diagnosis are indirect, and must therefore be accepted with great reserve. Those indirect signs are: the existence of varicose veins of the legs and vulva and extending on one side into the vagina; the antecedent existence of cervico-uterine ulceration, following the last labour, which, by the long continuance of the labour, by the great loss which followed, and the lumbar pains which accompanied it, all seemed to me to point to a variocose ulcer of the cervix-uteri; a condition which we so frequently meet with in the puerperal and post-puerperal state: lastly, the increased duration of menstruation, which, since the healing of the ulceration, was double what it was prior to the last of the three successive labours.

The varicose condition of the lower limbs and of one of the labiæ, coming on under the influence of three pregnancies in the space of as many years and causing a great feeling of fatigue, all this is especially worthy of note, and is suggestive at least of a similar varicose condition of the veins of the internal genital organs, especially as they all belong to the same venous system, and have frequent intercommunications.

The existence of an antecedent varicose ulceration accompanied by free discharge, which the cervix presented after the last accouchement, would lead to the supposition that after the rather tedious labour which the patient underwent, the deeper genital veins were the seat of morbid processes analogous to those which existed in the external organs. The intractable character of the ulceration, its frequent re-appearance, the existence of lumbar pains at intervals, which may be taken as a sign of mischief in the deeper genital veins, seem to warrant the belief that the tubo-ovarian plexus preserved in part, at least, the morbid dilatation which originated in the process of conception. It is unnecessary for me to prove, what is indeed admitted by most people, that gestation exercises an important influence in the development of utero-ovarian varices, such an influence is evidenced by the fact, that numerous cases of puerperal thrombus are proved

to be due to rupture of veins in the genitalia,* while it is extremely rare to meet with such cases apart from pregnancy; only two such have, I believe, been recorded, and both of those patients had previously been pregnant. Moreover, in the present case, the almost constant occurrence of pregnancy for three years consecutively, furnishes additional argument in favour of the probability of tubo-varix, and this again is strengthened by the fact next to be mentioned.

The habitual excess of menstruation after the previous labour showed that the genital organs were the seat of a congestion much greater than that which existed previous to marriage; of this the varicose condition of the internal generative organs may also be regarded as a cause. This etiology seems to me to be borne out by the morbid phenomena which occurred after the last pregnancy. In short, the character of the ulceration seems not only to explain the menorrhagia which existed during its continuance, but that also, which remained after its cicatrization; the two differ in nothing except in degree, and this proves to my mind that the character of the menstruation was but a manifestation of the morbid condition, which, immediately after labour, gave rise to varicose ulceration: when this healed, a part only of the venous system recovered its normal condition, the rest became varicose, as was seen in the right labium.

In all these three cases we observe that the patients were, or had been, mothers, and that in all, as well as in the case of M. Richet, the rupture of the vein took place after fatigue; in two of them it resulted speedily in death, in the other two it gave rise to hæmatocele. Once only it occurred during menstruation; in the other three it happened after that event. I mention these facts thus prominently because it may enable us with more or less probability to fix upon this (rupture of veins) as a cause of hæmatocele, in those cases where it occurs independently of menstruation, as the result of fatigue, and especially where the patient has previously had a number of children. This diagnosis acquires an amount of certainty when after parturition, especially if there have been many previous labours or they have succeeded one another rapidly, the veins of the lower extremities, and still more, those of the external generative organs, are left much varicosed; when, following that labour menstruation has become abundant; and lastly, when the patient experiences a sense of weight in the pelvis coinciding with painful distension of the external varicose veins. This last symptom,

* Deneux. *Loc. cit.*

which was described by one of the patients after the cure of her hæmatocele existed in Case II. and has been particularly dwelt upon by M. Richet in one of his cases.*

But even when all these signs exist, the diagnosis is still uncertain. To be otherwise it is necessary before the rupture of the vessel that an examination should be made at the time when, after fatigue, or under the influence of menstruation the pains of distension of which the utero-ovarian varix becomes the seat, are felt. We shall probably then find a kind of pasty, elastic tumour, occupying the lateral region of the uterus. Unfortunately these signs can only be detected when some attention has been given to the previous condition of the patient.

If the diagnosis appears to be doubtful, we must act much in the same way as if it were certain; that is to say, we must abstain from everything which might lead to a renewal of the hæmorrhage. Thus all warm baths must be proscribed, except in those cases where they are used as a means of encouraging the bleeding by the leeches; Sitz baths are especially prejudicial, and warm poultices which are always indicated during the acute stage of peritoneal inflammation should be substituted for cold resolvent or narcotic fomentations. As soon as the peritonitis is sufficiently improved to admit of the introduction of the speculum without much pain, we should make one or two applications of leeches to the cervix uteri, and favour the discharge thence by a large tepid bath prolonged so as to obtain the greatest possible discharge from the deep genital venous system. It is also important that leeches should be applied exactly on the day when menstruation is expected, in order not only to relieve the menstrual flow, but also with a view to guard against any tendency there may be to a fresh attack of peritonitis, and to further rupture of veins. I need not point out the absolute necessity for rest in bed and upon the back with slight flexion of the limbs; attention should also be given to the digestive organs. Of course the question of diathesis has little place here, though the general condition of the patient and the state of anæmia which is likely to follow either from the hæmorrhage or from the leeching will require attention and treatment. The diet must not be too severe, and tonics will be especially called for both on account of the disease and also because of the necessary confinement of the patient.

The possibility of the return of the hæmatocele requires that

* Richet. *Loc. cit.*, 2e edit., p. 367.

patients should avoid all kinds of fatigue, and that sexual excitement should be as far as possible kept down. I do not however recommend absolute continence which is such a frequent cause of evil connections; and which, moreover, is sometimes more prejudicial than otherwise to the patients themselves in the chronic stage of genital affections, as I shall point out in the Chapters on Pelvi-peritonitis. I content myself now by recording thus briefly my opinion on this point, and in pointing out that in the patient whose history I have given, sexual intercourse, from which she had abstained for a long time prior to the production of the hæmatocele, did not occasion any pain afterwards, while the fatigue of her occupation caused such suffering that she was obliged, much to her regret, to change it for one less lucrative. I may add, also, that the influence which is theoretically accorded to venereal excesses in producing rupture of a tubo-ovarian varix is not confirmed in the four cases I have reported; it would seem rather to be contradicted by them, since three of those patients had been continent for a longer or shorter period when the rupture took place.

II.—Hæmatocele symptomatic of bloody exhalation from the pelvic peritoneum.—Hæmorrhagic pelvi-peritonitis.

The existence of this second variety of hæmatocele is far from being proved. It rests entirely on two cases which were very briefly reported by M. A. Tardieu,* and which, though quite sufficient to prove what he wished to establish—that is to say, that an independent intra-pelvic hæmorrhage from lesion of the ovary may be the cause of sudden death, yet they would not seem to admit of the formation of a new class, because, as they are described, there is yet some doubt as to the source of the hæmorrhage. The fact, then, of hæmorrhagic pelvi-peritonitis, and its existence as a distinct variety of hæmatocele, rests in my opinion rather upon the pathological analogy of serous membranes generally, than upon the history of these two cases. Considering that the pleura, the pericardium, the arachnoid, and the abdominal peritoneum itself, as in the case described below,†

* A. Tardieu. *Annales d'hygiène publique*, juillet, 1854, 2e serie, t. ii. p. 157.

† Case by M. le Chaptois. *Arch. génér. de médecine*, 3re serie, t. v. p. 230, *et Bulletin de l'Académie*, 1839.

Madame R., aged 29, for several weeks past had suffered from a painful sense of distension and fulness in the umbilical region, and having ceased to menstruate she thought herself pregnant; she had had two children. After

may become the seat of a bloody exhalation, I was no doubt mistaken in the opinion that a like affection is impossible in the case of the pelvic peritoneum. The following cases prove the contrary :—

Case IV.*—We have met with two examples of this singular extravasation of blood in the pelvis behind the uterus. They occurred to two young women, who, attacked by this disease in the absence of pregnancy, sank so rapidly that in both suspicions of poisoning were excited. The first had been married three weeks. In the opinion of the husband, the disease might be attributed to excessive coitus. The second was a young Jewess, who died suddenly after excessive intercourse with the students. The ovaries were examined, and found to be healthy. The result of the *post-mortem* examination led to the belief that the effusion of blood was caused by an exhalation from the internal surface of the pelvic cavity.

The brief summary of the two cases, which I have transcribed, is scarcely sufficient to prove the existence of hæmorrhagic pelvic peritonitis, an affection which represents in the female the hydro-hæmatoceles which we sometimes see in the male produced by exhalation from the tunica vaginalis as the result of injury, nor does it permit of our tracing the pathological history of this affection, which it would be well to have placed beyond doubt. I have seen, like many other authors, hæmatoceles produced by venereal excess, but these terminated by resolution, and have not offered any peculiarity which

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a slight exertion the pain increased suddenly, and in two hours was very alarming; soon she turned pale, had a clammy cold sweat, vomited and died. Suspicions as to the cause of death were excited, and a *post-mortem* examination was ordered.

On opening the abdomen a quantity of black blood was found; the mesentery and mesocolon presented a number of clots on their anterior and outer surface. No rupture of blood-vessel could be seen, though it was carefully looked for; the uterus was of normal size and unimpregnated. "M. le Chaptois, relying on the integrity of the abdominal vessels, on the form and situation of the clots, on the symptoms which had existed for some time previous to the acute attack of pain, thought that the hæmorrhage resulted from simple exhalation, and that the surface of the mesentery was the seat of that exhalation. The predisposing cause he believed to be the amenorrhœa, which would produce engorgement of the mesenteric vessels, and the determining cause was the position and efforts of the patient at the moment of the attack."

* A. Tardieu. *Loc. cit.*, et *Thèse de M. Voisin*, p. 43.

justified the idea that the effusion of blood was the result of an exhalation from the internal surface of the pelvic peritoneum. I should say, on the contrary, that the metrorrhagic flux which coexisted in these cases with the intra-peritoneal effusion, clearly indicates that the internal sexual hæmorrhage came from some point of the inter-tubar canal. These cases, some of which will be related further on in describing the fifth variety, cannot be ascribed to hæmorrhagic pelvi-peritonitis, and I only mention them that I may not be accused of omitting facts to which others attach great importance, and of unreasonably rejecting what I have not seen. This criticism, therefore, like so many others to which I have been subject, falls to the ground, since I admit, though I have not proved it anatomically, that rupture of the ovary or of the Fallopian tube may be a cause of hæmatocele. Cases of this kind are grouped together in order to constitute a third variety, the history of which I have now to describe.

III.—Hæmatoceles symptomatic of rupture of the ovary or of the Fallopian tubes.

The existence of this third variety is proved by few but very conclusive facts, some of which occurred long before the introduction of the term hæmatocele into pathology. This omission might justify the belief that our ancestors had no idea of intra-pelvic hæmorrhages, but we find among their writings scattered observations which prove not only that they knew of these hæmorrhages, but also of every variety which this affection presents. Dr. Tilt also was able, in 1853, in summarising the labours of French authorities on this subject, to point out very clearly, not only rupture of the Fallopian tubes, but rupture of the ovaries also, as a cause of hæmatocele; and he directed special attention to this question, by pointing out that under these circumstances the rupture of the ovary is due to a morbid condition of that organ, and ought to be regarded as a pathological sequence of ovulation.* An opinion somewhat similar to the one I have transcribed from the second edition of Dr. Tilt's work, which M. Laugier certainly did not know of, was held by that author after observing some of these cases, and was indeed the groundwork of his theory of the

* E. J. Tilt. On *Diseases of Women, and Ovarian Inflammation*, p. 262, 2nd edit., Churchill, London, 1853.

genesis of hæmatoceles which he submitted to the Institute on the 22nd of January, 1855. I insert his observations in a note; because they are not very generally known.* Nor do I now make any objection, for as M. Laugier himself says, it is but a theory, and I have limited myself to facts of which this theory represents but a small number.

Hæmatoceles symptomatic of rupture of the ovary, the history of which I shall describe before referring to those symptomatic of rupture of the tube, are rare. We ought not of course to regard the cicatrix which has been the seat of normal ovulation as a sign of morbid rupture, merely because the hæmorrhage occurs at a menstrual epoch, no matter whether it is due to a varicose rupture, a defect in the excretion, or to an excessive secretion of blood from the tubo-uterine canal. But we cannot consider a case of this kind as proved unless it contains a circumstantial account of the pathological condition of the ovary, sufficient at least to set aside all doubts as to the

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* S. Laugier. *Comptes rendus des séances de l'Académie des sciences,* fevrier, 1855, t. xl. p. 458.

"From the preceding investigations I think I may draw the following conclusions:—

1. "Spontaneous ovulation is indeed, as we have said, the occasional cause of retro-uterine hæmatocele.

2. "The physiological congestion of the ovary during ovulation with continued opening of the Graafian vesicle, does not give rise to hæmatocele.

3. "In order to produce this there must be an increased congestion produced sometimes by accidental causes which come on either before, during, or a few days after the period. Abortions are not, as we have wrongly judged, the immediate causes of hæmatocele.

4. "Spontaneous ovulation gradually increases the volume of the hæmatocele.

5. "The ovarian vesicles successively open into the hæmatic cyst, and so remain; so that the ovary is destroyed by a small number of spontaneous ovulations under the conditions this organ presents after the commencement of the hæmatocele.

6. "The rupture of the Graafian vesicle being the outlet for the blood which escapes from the ovary, the cyst of the hæmatocele will most frequently be intra-peritoneal.

7. "The spontaneous ovulation and the hæmatocele have this character in common; a unilateral abdominal pain, the seat of which is the ovary whence the vesicle escapes.

8. "The rut in animals may give rise to an ovarian congestion, followed by rupture of that organ, that is to say to phenomena similar to retro-uterine hæmatocele."

signs of normal ovulation having been mistaken for a morbid lesion. The ordinary process does not give a larger clot than perhaps a drachm at most, consequently it is impossible to attribute the large effusion of blood which is met with in hæmatoceles to this cause. The condition I have pointed out, the necessity for which no one will dispute, unfortunately limits very considerably the number of cases of hæmatocele due to rupture of the ovary which I am able to include in my analysis. For this reason I much regret not being able to quote one of the cases contained in M. Prost's thesis, which appeared conclusive to those present at the autopsy, but which has been so obscurely described that it is impossible for me to understand what may be the *size of an orange, which was formed,* says the author, *by the ovary dilated by the cyst.* This case, which has been quoted in favour of M. Laugier's theory, I have summarised below,* in order that those who are more fortunate than I am may understand the enigmatical description of the ovarian lesion there given. The cases which I shall relate are happily more carefully described, even that of oldest date, published by Pelletan, who saw the case with Bichat, with which I shall commence.

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* Case of M. Prost. *Thèse inaugurale.* Paris, 1854, p. 38.

L., aged 35, had had two children. In December, 1852, she menstruated at proper time but less than usual. On the 10th of January, 1853, while lifting a weight she felt a sharp pain in the loins, and a sense of something snapping. On the 21st, menstruation came on very freely, and after that till her admission on February the 26th, a discharge of blood had continued with some hypogastric pain, rigors, fever, and vomiting. The abdomen increased in size, defæcation and micturition became difficult.

On examination a tumour was discovered rising to within three inches of the umbilicus, it was formed of three parts or lobes. *Per vaginam* a tumour was felt filling the pelvis, the cervix was behind the pubis, the whole uterus being raised. Pressure on the tumour outside was transmitted directly to the finger in the vagina, and very indistinct fluctuation was detected. She continued to get worse, and died at the end of March.

On *post-mortem* examination there were seen traces of peritonitis; the pelvis was filled with a large, irregularly shaped, tumour. On its anterior and lateral surfaces were two other tumours, *that on the right as large as an orange was formed by the ovary dilated by the cyst,* the left formed by the ovary was smaller. The Fallopian tubes were permeable, but adherent to the tumour. The tumour when opened exhibited a cavity the size of a fœtal head, filled with viscid, black, grumous blood.

CASE V.*—*Intra-pelvic effusion of blood from an ovarian varicocele.*

I was present at the *post-mortem* examination of a woman who had been under the care of Bichat at *Hôtel Dieu*, suffering from an obscure affection, which he only saw at the termination, but which he thought was peritonitis. Such was found to be the case, and there was observed on the peritoneum a number of black spots. The cause was quite apparent; for the left ovary was the size of a hen's-egg, covered with large red blood-vessels, and upon it a crack filled with a clot of blood. The pelvis contained about two ounces of black clotted blood. It was then a kind of aneurism or varicocele of the ovary. As I did not see the case during life, I cannot say what relation existed between the symptoms observed before death and the appearances found afterwards.

I will only add one remark in reference to the black spots found on the peritoneum, which are now well understood as indicating that peritonitis has existed for some time. But they do not prove that the effusion of blood found in the pelvis, which in this case was evidently of long standing, had been slowly exuded. To determine when this effusion took place, we require to know the circumstances which occurred during life. Unfortunately, in most of the cases which I have to mention, death took place either suddenly or after a short illness, as in the following case, which I have already recorded in my memoir of 1848.†

CASE VI.‡—*Sudden death during menstruation; extreme congestion of all the genital organs; distension of the uterus; adhesion of the right Fallopian tube to the ovary; defective union on the left side; rupture of the ovary; two ounces of blood in the pelvis.*

A woman, 21 years old, died suddenly from sunstroke, with the thermometer standing at 40° Reaumur. She was in good health before death. On *post-mortem* examination, the left ovary was found black, gangrenous, and half destroyed; the right ovary much inflamed and adherent to the Fallopian tube, its vesicles were

* Pelletan. *Clinique chirurgicale*, t. ii. p. 106. Paris, 1810.

† G. Bernutz. *Arch. génér., loc. cit.*, t. xviii. p. 414.

‡ Extrait Steinkuchl. *Examen cadavérique de deux personnes mortes par l'effet de l'insolation* (*Journal de Hufeland*, novembre, 1819, dans la *Bibliothèque médicale*, t. clxx. p. 250). Reproduite avec quelques variantes par M. Andral, *Clinique médicale*, t. v. p. 242.

filled with black coagulated blood. The uterine cavity contained some liquid blood. In the cavity of the pelvis were found two ounces of blood.

Immediately after this case appeared, another was published by M. Neuman, some account of which is given below.* M. Puech† believed, and, I think, rightly, that the hæmorrhage in this case was due to rupture of the ovary, though the author himself declared that he could not discover rupture of any kind, and attributed the sudden death to a sanguineous exhalation from the surface of the peritoneum covering the ovary, which was the seat of a large hydatid. In opposition to the opinion of M. Neuman, who would have placed this case along with the preceding variety, I have preferred inserting it here, because, though the hæmorrhage might be attributed to a sanguineous exhalation from the peri-ovarian peritoneum, it ought rather to be regarded as an affection of the ovary.

The following case of M. Drecq was published in the *Annales de la médecine physiologique*, 1826, and by whatever name we may describe it, the alteration of the ovary is none the less an example of rupture of that organ, followed by intra-pelvic hæmorrhage.

Case VII.‡—*Frequent menstruation; symptoms of peritonitis and internal hæmorrhage; death thirty hours after. Post-mortem examination; intra-abdominal hæmorrhage; rupture of the right ovary.*

A woman, aged 32, always menstruated regularly till October, 1825, when she had a sharp attack of colic, and since then, has menstruated every two or three weeks. In January, 1826, she had another and more severe attack, without any apparent cause, and in a few hours she was in a state of collapse. The diagnosis arrived at was peritonitis. Forty leeches were applied to the abdo-

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* Case of M. Neuman (of Berlin), 1821. Published in the *Bibliothèque médicale* de Royer-Collard, t. lxxviii. p. 113.

A woman, aged 35, in good health had never been pregnant, was seized with severe pain in the pelvis after taking a cold bath during menstruation. She had rigors, vomiting, great abdominal distension and extreme tenderness, and she died in a few days.

On opening the abdomen there was seen evidence of severe peritonitis.

† A. Puech. *Loc. cit.*, p. 23.

‡ Obs. de M. Drecq. *Médicin à Moulins (Journal universel des sciences médicales*, 1826, t. xiii. p. 361).

men, but, to my surprise and alarm, they could not draw any blood. In the evening of that day she expressed herself as feeling somewhat better, and there was less pain, but the pulse was imperceptible, and the lower extremities were quite cold. She died a few hours after.

Post-mortem examination.—On opening the abdomen, fifteen hours after death, three pints of black blood were found in the cavity; all the viscera were pale but healthy; no rupture of blood-vessel could anywhere be discovered. On searching for the uterus, a large firm clot of blood was found covering it. Four handfuls of this were removed, when the uterus and right ovary were found of normal size, but the left ovary was the size of a hen's-egg, black, inflamed, and presented a deep laceration, from which, by pressure, black blood similar to that found in the abdomen was extruded. The parenchymatous tissue of this ovary exactly resembled that of the spleen of a person who had died of scurvy. All the other organs were healthy.

This case has been so often discussed that I will only now make a few remarks as to the character of the ovarian lesion whence this rapidly fatal intra-abdominal hæmorrhage came. The patient had been subject to various functional ailments for many years, and this indicates the great probability that the metrorrhagias which preceded the rupture of the ovary were due rather to her cachectic condition than to any inflammatory affection of that organ, though this was not revealed by any symptom during life, and left after death none of the usual signs of ovaritis. Notwithstanding the opinion of MM. Hirtz and Chereau,* that this case was one of a particular form of ovaritis, which they called hæmorrhagic, it appears to me rather to merit the term apoplexy, which was given to it by Madame Boivin et Dugès.† I entirely agree with Cruveilhier,‡ and instead of attributing the softening of the ovary, which preceded the hæmorrhagic rupture, to inflammatory action, I believe that this organ was the seat of an undefined morbid action, similar to that described by my old friend Rochoux as hæmorrhagic softening, such as precedes cerebral apoplexy. The correctness of M. Cruveilhier's opinion is

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* Chereau. *Loc. cit.*, p. 169.

† Boivin et Dugès. *Loc. cit.* t. ii. p. 563.

‡ Cruveilhier. *Loc. cit.*, 13e livraison, p. 13.

still more manifest when we compare the lesions described in the preceding case with those which accompanied the following, in which the hæmorrhage was manifestly preceded by inflammatory action in the ovaries. But I am sorry to say that this case, interesting as it is from the coexistence of ovaritis with hæmatocele, is yet so wanting in regard to the morbid anatomy and symptomatology, that I have hesitated for some time about reporting it.

Case VIII.*—*Ovaritis and pelvi-peritonitis; metrorrhagia; cauterisation followed by peritonitis and death. Post-mortem examination; intra-abdominal hæmorrhage; old pelvic peritoneal adhesions; pus in the ovaries; rupture of the right ovary.*

C. D., aged 27, admitted into the Hospital, September 10th, 1855, with fungous ulceration of the cervix. For two months she had had continuous sanguineous discharge, and had rapidly lost strength. On examination, a fungous ulcer was discovered at the orifice of the uterus. The actual cautery was applied, and subsequently nitrate of silver. The discharge ceased, and the ulcer was healing, when, on the 2nd of October, she complained of feeling ill, with pains in the belly and fever, but no sickness. There was tenderness over the abdomen. The next day she was worse. Twelve leeches were applied to the abdomen. In the night hiccough came on, with vomiting and rigors. She died on the 4th.

Post-mortem examination.—On opening the abdomen, a quantity of black fluid blood was seen in the peritoneal cavity, chiefly in the pelvis. The pelvic peritoneum was covered with recent false membrane. The uterus and its appendages were glued together, and to the neighbouring organs, with plastic lymph. The left ovary was swollen, soft, and friable, and apparently infiltrated with pus. The right ovary was ruptured on the one side, and from it a soft black clot of blood extruded. When the ovary was cut into sections, a bloody cyst seemed to occupy the Graafian vesicle. Beside this was a tolerably large cavity, which might be connected with the other Graafian vesicle. It seemed that the blood in the utero-rectal *cul-de-sac* came from this blood cyst.

The defective history, and the want of precision in the description of the peritonitis to which this patient succumbed, preclude any analysis of the case. I have simply reported it, as I said, because

* Luton. *Gazette médicale*, 1856, p. 76.

of the inflammatory condition which the ovaries presented, especially the right one, which was diffluent, and seemed to have furnished the intra-peritoneal hæmorrhage.

The following case, by M. Puech, formed the groundwork of his remarks on the subject of hæmatocele :—

Case IX.*—*Menstrual suppression from mental emotion ; menorrhagia ; menstrual suppression four months after followed by peritonitis ; death. Post-mortem examination ; intra-abdominal effusion of blood from rupture of the ovary.*

A. B., aged 28, admitted January 24th, 1859, with arthritis of the left knee, for which fifty leeches were applied. All went on well till March the 2nd, when she was seized with violent colic in the hypogastric region. The next day she was worse. The pain increased, especially in the right iliac fossa; pulse small and frequent; nausea. Thirty leeches were ordered, and emollient fomentations, believing the case to be one of peritonitis; but I was puzzled how to account for its origin. At first I thought a fœtal cyst had ruptured. I learned that a year before she had had a child, which she did not nurse. Since then, she had been regular till four months ago, when, under the influence of strong mental emotion, the catamenial secretion suddenly stopped. Some hours after, she had severe pain in the right iliac fossa, for which twenty leeches were applied. Since then, menstruation has been freer and more frequent. Three days ago it stopped, and then the pains began.

On the 4th, the pain was somewhat relieved, but returned in the night, and the patient became greatly depressed, with incessant nausea and vomiting. The abdomen became more tender. There was difficult micturition, constipation, and tenesmus. Ordered, mercurial frictions, purgative lavement; on the 5th she was much worse, and she died in the evening.

Post-mortem examination twenty-two hours after death.—On opening the abdomen, about sixteen ounces of fluid of a milky chocolate colour mixed with clots of blood, ran out from the pelvis. The peritoneum was inflamed; the intestines were perfectly healthy; the mucous membrane of the uterus was highly congested, as were the Nabothian follicles; the left tube and ovary were healthy; those on the right side were agglomerated, and formed a tumour principally

* A. Puech. *Loc. cit.*, obs. viii. p. 29.

of the ovary, the size and shape of a pear. In its centre was an irregularly triangular opening. The cavity and fimbriated extremity of the Fallopian tube were obliterated by old adhesions, and firmly united to the anterior wall of the tumour. The tumour itself occupied the place, and was formed at the extreme end of, the ovary, and was composed of blood. The wall of the tumour was composed in parts exclusively of peritoneum, in others of fibrinous deposit placed in layers of different consistence, resembling the fibrinous walls of an aneurism—the centre was composed of clots and liquid blood.

The rapidly fatal termination which took place in this and the two preceding cases, the sudden death which occurred in the second case, and the absence of any description of the symptoms which occurred in the case observed by Pelletan and Bichat, render the diagnosis of this form of hæmatocele very difficult. Still, in these five cases, there are so many symptoms in common, that we may venture to hope that an analysis of these and other cases will enable us to judge during life whether or not the ovary is the source of the hæmorrhage. Where we find, for instance, the occurrence of hæmorrhagic peritonitis in the absence of menstruation; the absence of any bloody discharge from the vulva at the time the symptoms began; the coexistence at the commencement of the attack of two distinct groups of symptoms—the one referable to internal hæmorrhage, the other to inflammation of the abdominal serous membrane; and lastly, the absence of all dysmenorrhœic phenomena, either at the time, or at the menstrual period preceding the peritonitis. When we find such a concurrence of symptoms it is strongly confirmatory of ovarian lesion.

I do not, however, attach much importance to the first of these conditions, which we find noted in four of the five cases I have reported, because it might be objected that if in three of them no mention is made of it, the absence might be attributed in two to the length of time since they were recorded, and in the third, which is of modern date, to the paucity of details as to the patients' antecedents. I think, however, that this objection is groundless, because in these three cases this absence corresponded with the *post-mortem* appearances, which in none showed the actual existence of menstruation: while it was, on the contrary, revealed so clearly in Hufeland's case, that without any antecedent history, it was evident that the rupture of the ovary occurred at the same moment that the

catamenial function was accomplished, and before it was shown by any external sanguineous discharge. I am the more disposed to draw from these facts the conclusion that there is no necessary connection between the ovarian apoplexy and menstruation, because the case of M. Puech, which alone contains circumstantial details on the menstrual function, shows clearly, that it was three days after menstruation had ceased, and without there being any discharge of blood externally, that rupture of the ovary occurred.

The absence of any sanguineous discharge from the vagina at the time when the effusion of blood into the peritoneal cavity occurs, provided that no dysmenorrhœic phenomena were present at the previous period to excite suspicion as to the existence of menstrual retention, is a point of much greater importance in diagnosis than that just considered. In a large number of cases, it serves to distinguish hæmorrhages consequent upon rupture of the ovary, from hæmatoceles caused by sanguineous hypersecretion of the generative mucous membrane, which constitutes my fifth variety.

But before describing metrorrhagic hæmatoceles, I must inquire into the value of the sign which I have just mentioned, because M. Laugier,* in the arguments which precede the explanation of his theory, quoted at the beginning of this chapter, has brought forward, as a pathognomonic sign of hæmatoceles symptomatic of rupture of the ovary, the production of a bloody discharge externally. In this opinion I cannot concur. It seems contradictory to expect the production of a sanguineous discharge externally as a sign that ovarian hæmorrhage is going on into the peritoneal cavity, and cannot escape externally by the Fallopian tubes and uterus. The five cases already quoted, which are the only ones I know that can be legitimately regarded as examples of morbid non-puerperal† rupture of the

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* Laugier. *Comptes rendus dès séances de l'Académie des sciences*, 26 fevrier, 1855, t. xl. p. 457.

† The following case recorded by Dr. Pollard in the *Lancet* of March, 1848, is interesting as an example of double rupture of the ovary and Fallopian tube while empty.

A woman, aged 28, was suffering from rheumatism when she was suddenly seized with nausea, vomiting, and pain in the right side of the abdomen; her face became anxious, and pallid, the pulse imperceptible, the extremities cold, respiration oppressed; in short, collapse was complete; and she died in twenty hours, evidently from internal hæmorrhage.

On opening the abdomen a quantity of blood was seen, but no rupture of any of the viscera could be detected. In the pelvis a clot was found in the

ovary, are unanimous on this point; in none of them was there, during any part of the illness, a discharge of blood from the vagina. The case of M. Prost, before-mentioned, is the only exception, and this proves but little, for it is impossible to say whether or not that can be called a case of true ovarian apoplexy; nor whether, concurrently with that apoplexy, there was a morbid flux from the generative organs, part of which regurgitated into the peritoneum, and gave rise to hæmatocele. I need not say that we cannot regard as exceptions cases of hæmatoceles accompanied by a bloody discharge externally, in which the character of the ovarian lesion is such that we recognise it at once as the physiological evidence of ovulation, which necessarily exists concurrently with hæmatocele in women who are menstruating.

It is necessary to state that this coincidence of the signs of ovulation occurs not only in all the varieties of hæmatocele, but also in all affections, whether of the generative or other organs, which are developed during menstruation; consequently the pathological correlation which we might wish to establish between the development of the affection and the signs of ovulation, when these present their normal condition, is weakened. I make this remark, because by it we are enabled to form an opinion of the theory propounded by Lenoir,*

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left Fallopian tube. On separating the uterus its cavity was filled with muco-sanguineous fluid and lined with a decidual membrane. The left tube contained a clot of blood the size of an almond. About an inch from the uterus at the upper part of this tumour was a rent, and within, a small sac so compressed and deformed by the clot, that it was impossible to say whether or no it was an ovule. The left ovary was the size of an apple, filled with blood, and ruptured.

* M. Lenoir, at the *séance de la Société de chirurgie, du 4 juin*, 1851, in reference to a paper of M. Denonvilliers, said, "In the two cases, which M. Denonvilliers read to the Society, he mentioned that the accidents were developed immediately after the menstrual period, and in the specimen we see, on the surface of one of the ovaries, two small blood cysts, open. Does not this coexistence explain the etiology of these blood effusions? Do we not know that at each menstrual epoch there is a rupture of one of the organic vesicles, and the ovum contained in it falls either into the tube or into the peritoneal cavity. This rupture is always accompanied and followed by a slight effusion of blood, but sometimes it is sufficient to form on the surface of the ovary a tumour the size of a nut, as I have seen in two cases in women who died during menstruation. Now, may it not be that the blood coming from the rupture of the ovarian vesicle, instead of being small in quantity and on the surface of the ovary, may be effused

and supported by Nélaton.* After the remark now made, it is unnecessary for me to insist upon the impossibility of a hæmorrhage sufficient to fill the pelvic cavity being produced from one or two Graafian follicles.

In order to establish a pathological relation between hæmatocele and rupture of the ovary, the characters of the morbid lesion ought to be well marked. There ought, in particular, to be, in connection with the laceration, a change in the tissue of the organ analogous to that which existed in the cases of MM. Drecq † and Puech,‡ which, in my opinion, are the only clear cases in which the rupture of the ovary was the demonstrable source of intra-peritoneal hæmorrhage.

I do not deny that, under certain circumstances, an ovule, and the sanguineous exhalation which accompanies it in its ordinary course to the uterus, may, owing to some defect in the application of the tube to the ovary, fall into the peritoneal cavity instead of being caught by the fimbria of the tube, and so give rise to a small blood tumour. But the rare occurrence of effusions of this kind, only a few of which legitimately deserve the name of extra-uterine ovulation which was suggested by M. Gallard, is no warrant for the general application of the theory to all cases of hæmatocele. On the contrary, they are distinguished from other varieties of hæmatocele by special characters of their own. In fact, we occasionally see these sort of miniature hæmatoceles in the case of women who have died suddenly during ovulation, where no, or but very insignificant, symptoms, have existed during life, so that they seem scarcely to deserve the name of morbid. I will only add that, to the transformation of these ovular clots, we may fairly ascribe some of those small serous cysts which are sometimes seen floating about in the peritoneal cavity at the extremity of a long narrow ovarian pedicle, which M. Ruysch has represented in one of his cases.§

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so as to form a slight hæmorrhage into the peritoneum and accumulate in the recto-vaginal *cul-de-sac*? This idea occurs to me from the coincidence before mentioned, and is, I think, worthy of consideration."

* Nélaton. *Leçons faites à l'hôpital des cliniques* (*Gaz. des hôpitaux*, decembre, 1851). † Case VII., p. 184. ‡ Case IX., p. 187.

§ Obs. de Ruysch. *Loc. cit.* obs. lxxxiii., edit. d'Amsterdam, 1691.

Sterility from closure of the Fallopian tubes:—

The author remarks in reference to this case that sterility in women arises from a variety of causes, among others from stricture of the Fallopian tubes, the obstruction being situated either at the proximal or distal extremity. The frequency of this condition, he says, we should never

To resume the consideration of morbid ruptures of the female testicle. As I have before said, it is only in consequence of some error of nutrition, probably of long standing, that this organ bursts under the influence of a rush of blood, and pours into the peritoneal cavity one or more pints of blood, as happened in some of the foregoing cases.

Few as is the number of these cases, yet the ovarian phenomena which preceded the formation of the hæmatocele do not appear to have been the same in all cases. Thus, M. Luton's case (Case VIII. of this Part), though it is unfortunately very incomplete, seems to show that the ovarian rupture may be caused by inflammatory action; while in the others it appears to have been caused by alterations of texture due more or less to perverted function. But even among these last cases there are some very marked differences. Thus, while it is impossible to recognise in the undefined softening described in M. Drecq's case (Case VII. of this Part) any trace of the morbid vesicular hæmorrhages described by M. Robin,* we may

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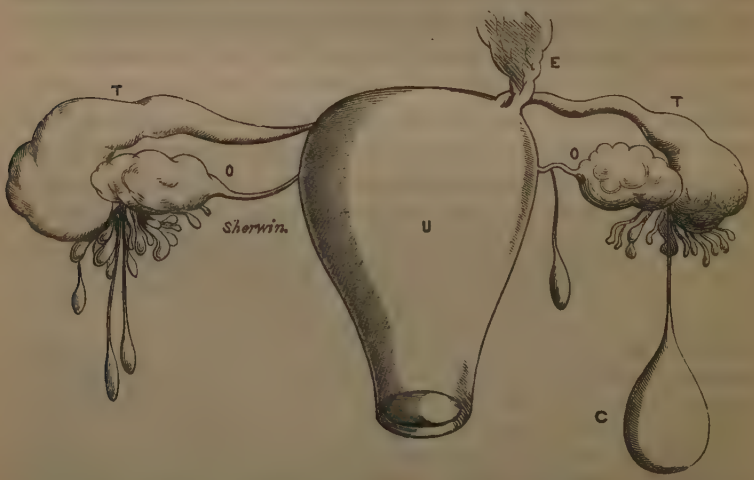
have imagined had it not been revealed by *post-mortem* examination. He points out also that when the obstruction is situate at the uterine extremity of the tube, it is not uncommon to find the ovary and distal end of the tube united together. These points are all represented in the annexed sketch.

FIG. 4.



U. Uterus. O. Ovary. T. Fallopian tube. C. Cyst. E. Epiploon.

* Robin. *Société de biologie* (*Gazette médicale de Paris*, 1857).

yet with some reason believe that that kind of lesion did precede the ovarian rupture in M. Puech's case (Case IX).

I shall not insist on this point of etiology, because it is necessary, in order that these abnormal vesicular hæmorrhages may be cited in pathology, that we should determine by clinical observation what are the disturbances which may give rise to these kind of ovarian moles, and under what diathetic or accidental conditions the ovary takes on that kind of action which tends to its rupture on very slight occasion.

This rupture does not necessarily occur during menstruation, and the fact that it may happen at other times constitutes an element in the diagnosis of this form of hæmatocele, for it serves to distinguish a hæmatocele caused by rupture of an ovisac from that produced by an error in the act of excretion, both being unaccompanied by any sanguineous discharge during the earlier part of the effusion. The absence of this last symptom in all the cases of ruptured ovary I have met with, and its constant occurrence in those which I have denominated metrorrhagic would, but for the case reported by M. Prost (*vide* p. 182), occupy a very important place in differential diagnosis. The existence of that case makes it very necessary to inquire carefully into the symptoms which preceded the hæmatocele. Thus hæmatoceles which are symptomatic of apoplexy of the ovary occur in the course of an affection which is hardly recognisable during life: while metrorrhagic hæmatoceles, on the contrary, are met with during the progress of diseases which are or may be attended by a discharge of blood.

There is another very important point in the diagnosis of this affection, viz., the different character of the symptoms after rupture of the ovary, compared with those occurring after the escape of menstrual blood into the peritoneum. This difference, we shall find exists alike in all cases of rupture, whether of a vein, a Fallopian tube, or a fœtal cyst, and it serves to establish the distinction laid down by M. Trousseau between intra-pelvic hæmorrhages and those cases of retro-uterine effusions of blood, such as constitute our fourth and fifth varieties, and to which M. Trousseau has given the name of *catamenial hæmatocele.*

The symptoms which followed rupture of the ovary in those cases which I have recorded comprise, as I have said, two distinct groups, the one arising from peritoneal inflammation, the other caused by the hæmorrhage from the ruptured ovarian tissue. The

former of these symptoms I have already fully described in the preceding Part. The latter group it will be necessary to say some few words upon.

One point to determine is, whether the general pallor, the prostration, the syncope, the symptoms which are generally regarded as indicative of internal hæmorrhage, and all of which exist in cases of rupture of the ovary, whether these are caused simply by the amount of hæmorrhage, or by the traumatic injury to the ovary, producing symptoms analogous to penetrating wounds of the abdomen. I shall not stay to prove that the differences in the symptoms cannot be attributed to the amount of blood effused. This fact is abundantly seen by reference to Cases II., III., IV., V., VI., and VIII., in the preceding Part where hæmorrhagic peritonitis came on after operations for the cure of congenital imperforation. It is true that between these cases and those of rupture of the ovary an important difference is to be observed. It is, that in menstrual retention the blood which escapes into the peritoneum is the accumulated product of a normal secretion, and cannot therefore be regarded as a hæmorrhage, or give rise to any severe symptoms as such, nor can it produce any kind of shock upon the system such as results from rupture. I the more willingly accept this reason, because it explains the very different aspect presented by those who are suffering from hæmatoceles from impeded excretion, and those who are affected with the metrorrhagic form of the disease, the latter being so marked a condition as strikingly to suggest the idea of cancer.

But this does not quite account for the absence of the characteristic signs of internal hæmorrhage in cases of metrorrhagic hæmatoceles, especially in those which have proved rapidly fatal, and where the effusion has been as great as in rupture of the ovary. Though I dare not positively attribute the difference to the fact that the subtraction of blood by rupture is more rapid than by exhalation from the mucous membrane, I must say that this is the only explanation that seems to me probable. But it is really of little consequence if the cause of this difference remains undetermined; for we have in the group of symptoms characteristic of internal hæmorrhage, distinctive signs which belong exclusively to hæmatoceles from rupture, and which do not occur in catamenial hæmatoceles. I should add that the hæmorrhage by rupture must be both profuse and rapid, or the signs of internal hæmorrhage will be wanting. There are three cases which appear to be exceptions to all others in this respect, viz., one of rupture of an

aneurism of the iliac artery reported by Dr. Tilt; Case III., already reported at page 172,; which seems to be an example of hæmatocele from venous rupture; and, lastly, the case of M. Switzer (*vide* page 196). In none of these was there that violent disturbance which results from hæmorrhage in those cases of rupture where the effusion of blood is great and rapid; and the difference would seem to depend on the slowness, or apparent slowness, of the effusion.

It is unnecessary for me to enumerate the various elements of diagnosis, drawn from the coincident phenomena; for example, the premonitory of symptoms, the seat of pain, its intensity at the lower part of the abdomen, the progress of the disease, and, lastly, the accompanying functional disorders which distinguish the peritonitis of perforation from that of hæmorrhage, and leads to the conclusion that the genital organs are the seat of mischief. Having settled this point, we proceed, by the process of exclusion, although we obtain perhaps only doubtful probabilities, to establish that the seat of rupture is either in a utero-ovarian varix, or in a fœtal cyst, or lastly, in the Fallopian tube or ovary. I do not mention the uterus, because rupture of this organ does not arise without some antecedent lesion, which it is generally easy to make out.

I think we may put aside the idea of rupture of a utero-ovarian varix, where there is no sign of venous stasis in the lower limbs, or especially on the external genitalia, either past or present; no sensation of weight in the pelvis which is increased at each menstrual period, or on standing; nothing which leads us previous to the rupture to suspect the existence of distension of the veins of the broad ligaments, we may then be sure that the hæmatocele is not symptomatic of rupture of utero-ovarian varix. But this diagnosis is of much less importance than that which we must make between non-puerperal rupture of the ovary, and intra-pelvic hæmorrhage symptomatic of extra-uterine pregnancy.

This diagnosis rests on so many points, as we shall see in the Part devoted to the consideration of this kind of intra-pelvic hæmorrhage, that we cannot in the present day deem it an impossibility; though to trace it out requires a clear knowledge of extra-uterine pregnancies, its discussion would therefore be out of place here. It only remains then to distinguish hæmorrhage symptomatic of rupture of the ovary from that produced by rupture of the Fallopian tube. I shall make no attempt to settle this point, because it is one which is and will always be impossible. For this reason I

hesitate to separate hæmatoceles symptomatic of rupture of the ovary from those of the Fallopian tube; the more so as the two kinds have many points in common. Both are preceded by a longer or shorter pathological condition; moreover, the seat of mischief is in contiguous organs, which belong to the same apparatus, and are almost identical in the symptomatology of their diseases. Indeed, I am rather disposed to consider them as varieties of the same diseases which may be studied together.

The kind of hæmatocele we are now considering was pointed out, but without any idea of priority, by Dr. Tilt, who strengthened his opinion by reference to a case, which I subjoin as a note,* though contrary to his interpretation, it seems to me, as it did to its author, Professor Switzer, to be an example of rupture in tubal pregnancy. M. Puech† also gave especial attention to this variety, and I regret that I cannot accord him the honour which he claims of having discovered tubal hæmorrhage. Of six cases of rupture of the tube, which he has brought together, one only, which I shall first examine, can be positively considered as an example of spontaneous rupture of the tube: the others do not seem to deserve this interpretation, especially when we take the trouble to refer to the original cases, which are much more explicit than the extracts given by M. Puech.

Case X.‡—*Menorrhagia, leucorrhœa, and uterine colic; sudden symptoms of intra-abdominal hæmorrhage; death twenty hours after. Post-mortem examination.—Considerable intra-pelvic hæmorrhage;*

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* Case of Professor Switzer, extracted from Dr. Tilt's book, case 73, p. 58.—A multipara, aged 37, was seized with lumbar pain, the menses were four days late, the left hypogastric region became tender, and soon tympanitis and vomiting followed. She succumbed in ten days.

Post-mortem examination.—General peritonitis. A large clot of blood filled the left iliac fossa and pelvic cavity; the uterus was normal in size and the appendages on the right side healthy. The left half of the uterus and its appendages were larger and more distended than the right; the Fallopian tube midway was the size of a nut, a probe introduced at the fimbriated extremity passed into a cavity in the centre of the clot which dilated that portion of the tube; a layer of plastic lymph lined the cavity of the uterus. Dr. Tilt thinks this cavity in the clot is the same as that found in polypi of the heart or arteries.

† Puech. *Loc. cit.*, p. 55. Montpellier, 1858.

‡ Pauli. *Gazette des hôpitaux*, 1847, p. 155.

enlargement and hypertrophy of the right Fallopian tube; rupture of the same tube half-an-inch from its fimbriated extremity.

A woman, aged 36, began to menstruate at 15, had suffered a good deal from leucorrhœa, and occasionally from menorrhagia. A few days after an attack of this kind she, on the 13th of September, 1846, went to a dance in the open air. Suddenly she experienced severe colicky pains in the lower part of the stomach, and faintness. She went to bed, the pain continued, and she was sick; but she declined to call in a medical man.

The symptoms became more and more alarming; and she gradually sank exhausted, but without any pain, twenty hours after the first symptom. The suspicion at first being that she had died of poisoning.

On *post-mortem* examination, all the abdominal organs were observed to be quite healthy, but very bloodless. In the pelvis a large quantity of blood was discovered, clotty and fluid. After careful examination of the principal blood-vessels, arterial and venous, without discovering anything abnormal, the uterus was examined, together with its appendages, and the source of the hæmorrhage was soon apparent. A small rupture of the right Fallopian tube being discovered at about half-an-inch from its distal extremity, blood was oozing from it, and it was evident that this was the seat of the bleeding; the tube itself was also a good deal enlarged; the uterus was quite empty, its walls a good deal hypertrophied, and its interior coated with a thick, dirty-brown muco-sanguinolent fluid; the ruptured tube contained some blood-clots and altered blood; the left tube was tolerably healthy and normal in size.

The other five cases present but little similarity to this,* three of

* Of the five cases collected by M. Puech, one (reported by M. Reiffleck, *Gazette médicale de Paris*, 1852, p. 361) is a case of rupture of the uterus.

The second, extracted from Baudelocque (*Hémorrhagies internes de l'uterus*) is a case of rupture of the tube during labour.

The third, though very incomplete, appears to be an example of rupture of the tube occurring during tubal pregnancy. The two last seem also to be cases of rupture in tubal pregnancy. They are summarized as follows:—

Obs. de M. Royer (de Joinville), *communiquée à l'Académie de medecine par M. Velpeau, séance du 2 octobre*, 1855. (Puech, *loc. cit.*, obs. xiii. p. 55.)

A multipara was seized suddenly with sharp abdominal pain, rigors, and vomiting, and died with symptoms due either to poisoning, or to perfora-

them appear to be instances of rupture of the tube following pregnancy; while the case by M. Pauli seems, on strict analysis, to be rupture of the Fallopian tube, following chronic inflammation of that organ.

Of course I do not urge in favour of my opinion the absence of any proof of a fœtus or of its membranes amongst the clots found in the pelvis, for though this may be necessary for the absolute proof of extra-uterine pregnancy, its want does not authorise the denial of an abnormal gestation, especially when it is not shown that a minute search was made, and where the other circumstances are in accordance with the supposition of its existence. But in the absence of any proof of tubal pregnancy, we may note the condition of the clot of blood found in the tube, the softening of this organ in the situation of the clot and about the seat of rupture; and, lastly, the pathological condition of the uterus which differed so greatly from the physiological development which occurs in extra-uterine gestation. The clot of blood found in the tube did not, from the first resemble the collection of blood which in tubal pregnancies usually forms a sort of matrix for the ovum; it was of small size, was exactly limited to the softened portion of the tubal mucous membrane, and had not the cavity which exists in the majority of abnormal gestations; especially in cases like that of M. Switzer (note p. 196). This opinion is confirmed by the want of organisation of the clot, by the absence of adhesion between it and the membranes so that it could not possibly be regarded as a placenta.

In the case of M. Switzer the clot appears, so far as we can judge from the brief description, to have been of recent formation, and was formed at or a little before the commencement of the events which rapidly brought on death. This agrees perfectly with the

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tion of the bowel, or to rupture of a vessel. At the *post-mortem* examination rupture of the left Fallopian tube was discovered, with a clot of blood fixed in the tube, which was also dilated and filled with blood.

Obs. de Godelle. *Nouvelle Bibliothèque médicale*, 1828, *reproduite par M. Puech*, obs. xvi. p. 63.

A multipara at a menstrual period was seized with violent colic and vomiting, cold sweats, hiccough, and death in seven hours. *Post-mortem* examination.—The right Fallopian tube was perforated near its uterine extremity, from which eight pounds of blood had escaped into the abdomen; the peritoneum was healthy.

pathological origin to which the lesions of the tube seem to be due, and which are far more important on this account than the coagulum of blood.

In fact the enlargement of the tube to the size of the middle finger, accompanied by great thickening of the walls of the duct, while the cavity was neither markedly dilated nor obliterated, is very different from the ampullary tumefaction at the two extremities, and especially the uterine, which we observe in tubal pregnancies; in short, the equal enlargement of the whole tube is of itself enough to put aside the idea of abnormal gestation. Then, too, we find coexisting with this alteration modifications of tissue significant of morbid hypertrophy; under this head, I notice the infiltration of blood into the walls of the tube, which were uniformly thickened even to the circumference of the rent; the irregular edges of the rent, the seat of the laceration, about half an inch from the fimbriated extremity, which seldom occurs in ruptures in extra-uterine pregnancies; and, lastly, the softening of the tubal mucous membrane in the portion of the wall corresponding to the infiltration, which was such that the membrane covered by the clot was in a putrid condition.

These alterations show that chronic inflammation had prepared the way for, if it had not caused, the perforation; and beyond doubt the rupture of the tube was due to inflammatory action, analogous to that which takes place in dilatation of the bronchi. This morbid condition, followed, probably, by an exhalation of blood into the tubal cavity, brought about the perforation of that canal. I do not stop to inquire whether the tube before its rupture really had been the seat of an exhalation of blood, because after all the solving of this question is of small importance compared with the demonstration of the possibility of a rupture of the oviduct occurring in the unimpregnated state. No doubt, rupture of the Fallopian tube and the inflammation which gives rise to it may receive a different interpretation from the exceptional character of the case and the difficulty of recognising anatomically early tubal pregnancy.

Chronic inflammatory catarrh of the uterus and Fallopian tube, to which, in all probability, the perforation of the latter organ, and the consequent intra-pelvic hæmorrhage, was due, was, moreover, indicated by a train of symptoms, which it is needless to specify, but which, though difficult to trace out, demonstrates the relations between the lesions found at the *post-mortem* examination and the

symptoms observed during life. The patient, did not present one of the ordinary signs of pregnancy which usually exist in abnormal pregnancies. Indeed, so frequent are they, as we shall find in the majority of the cases reported further on, that in the case of extra-uterine pregnancy the patient generally believes herself to be pregnant even in opposition to the opinions of the physcians she may have consulted.

Taking all these circumstances together it seems to me clear that in the case just considered the rupture of the Fallopian tube, which resembles in its anatomical structure the corpus cavernosum,* and the consequent hæmorrhage, was not caused by tubal pregnancy, but was the result of chronic inflammatory catarrh, extending probably from the uterus to the Fallopian tube. This seems to me to settle the individuality of hæmatoceles symptomatic of simple morbid rupture of the tube, whose existence was pointed out by Dr. Tilt, though he grounded it, indeed, on a case, which, it seems to me, was an example of tubal pregnancy. This, however, is not of much consequence if the preceding case be thought conclusive.

I have thought this long discussion of this case necessary, not only because it is an exceptional one, but in order to show that in cases of this kind the hæmorrhage is not the consequence of simple congestion of the tube, but the result of a long-continued morbid action, which ends in rupture of the oviduct and effusion of blood into the abdomen from the laceration of an essentially vascular organ. I must insist on this case as showing the difference between intra-pelvic effusions of blood symptomatic of rupture of the tube, and those caused by hæmorrhagic exhalation from the mucous membrane of this duct, which by its position is in free communication with the peritoneum. There are so few points of analogy between these two classes of cases, the one of which is accompanied by signs of internal hæmorrhage, while the other is not, that I am surprised that M. Puech should quote cases of rupture of the oviduct, and especially of the gravid oviduct, to demonstrate the existence of tubal hæmorrhage by exhalation.

I do not deny the existence or the possibility of effusion into the peritoneum under these circumstances; I believe it is the cause of some forms of hæmatoceles, as Dr. Barlow has very aptly pointed out

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* Haller. *Elementa physiologiæ*, t. vii. liv. 28, § 31, 2e édit Lausanne, 1778. Rouget, *loc. cit.*, *Journal de la physiologie de l'homme.*

in the remarks following his case.* Fenerly†, also, very explicitly enunciated and discussed this veiw; Puech,‡ also, studied it at length, and Professor Trousseau § has developed it yet further. But there is so much difference between cases of this kind and those in which the effusion of blood is the result of rupture of the Fallopian tube, that instead of being brought together they ought to be separated. I shall, therefore, not treat here of hæmatoceles by tubal exhalation; these will be studied with the other varieties which I call metrorrhagic hæmatoceles, including also the hæmatoceles caused by uterine exhalation. The localising the seat of hæmorrhage in this variety is of very little importance if the morbid state, of which it is a symptom, is recognised. For this reason I shall, in one of the following chapters, give the history of hæmatoceles from tubal exhalation, and in it I shall allude to the points in M. Trousseau's lecture, in order to show that in principle they do not differ greatly from the opinions I am developing. But this is not the place to consider this question.

I allude to it now only in order to combat the seductive attempt to find a general theory as to the origin of hæmatoceles. As I have said in preceding chapters, we have no more reason for attributing, as M. Trousseau has done, the development of all catamenial hæmatoceles to an exhalation of blood from the Fallopian tube, than to any other cause. The want of resemblance between the various effusions of blood from the Fallopian tube, the result in one case of a pathological rupture of the organ, in the other of an excess of blood secreted from the mucous membrane, shows how arbitrary and unsatisfactory it is to apply an etiology generalised from some particular facts, to all the varieties of an affection which, like hæmatocele, occurs under very diverse circumstances, each presenting different symptoms and different indications for treatment.

I need not say that in the event of peritonitis supervening on a hæmorrhage from rupture of the ovary or Fallopian tube, when that is accompanied by syncope, fainting, and the train of symptoms indicative of rapid and profuse abstraction of blood, the opening of a vein is absolutely contra-indicated, and leeches would only fall off

* Barlow. *Lancet*, vol. i. 1839-1840, p. 327, reprinted in the *London and Edinburgh Monthly Journal*, 1841, p. 877.

† Fenerly. *Thèse citée*, 1855, p. 27 et suiv.

‡ A. Puech. *Loc. cit.*, 1858, p. 47 et suiv.

§ Trousseau. *Gazette des hôpitaux*, 22 juillet, 1858.

as soon as applied, as happened in the case of M. Drecq.* The indication in such a case is plain; we must stop the hæmorrhage; support life by diffusible stimulants; and disregard the peritonitis at any rate for the first few days. The first indication we fulfil by placing the patient in a horizontal position, the head resting on a small bolster, and the lower limbs gently flexed towards the abdomen, the lower part of the belly should be covered with a light layer of pounded ice, or with a compress of linen folded twice and dipped in the coldest water we can get, which must be constantly reapplied. And while we have recourse to refrigerant applications to stay the hæmorrhage and to suspend or reduce the inflammatory action in the serous membrane, we must with the same view, as well as to combat the fits of syncope which come on one after the other, apply flying sinapisms to the arms, and if these are not enough, we must raise a large blister on the forearm by a compress dipped in liquor ammoniæ.

Lastly, we must, concurrently with this latter treatment, which acts by the pain it causes, and which, in a state of extreme weakness, is a most rapid tonic, endeavour to stop the vomiting, so that we may fulfil the second indication, viz., restore vital power by means of cordial medicaments. To relieve thirst and stay the vomiting we may give ice, and every quarter of an hour a few drops of laudanum in a spoonful of the æther mixture. A little port wine or cordial drink may, perhaps, be first borne, and then cold beef-tea. We must keep up the patient as well as we can by tonics, without any fears about renewing the hæmorrhage or increasing the peritonitis at a time when we want, above all, to stay the threatening death. If, happily, the patient survives the hæmorrhage, and general peritonitis at the end of twenty-four or thirty-six hours declares itself, we must then attend to the serous inflammation which we shall find now from the extreme anæmia presents some special indications. On this account we must continue the tonic treatment in spite of the inflammatory action, and hesitate long before we resort to bleeding, though some physicians fancy this necessary in every case of peritonitis. After we have for some hours used cold compresses, gradually renewing them at longer intervals, we may have recourse to large flying blisters all over or partially over the abdomen, which, as soon as they have risen, should be covered with

* Drecq. Case vii. p. 184.

linseed poultices well sprinkled with laudanum. This revulsive treatment and the internal use of diffusible tonics and opium, both by mouth and enema, pushed to slight narcotism, should be continued as long as the acute symptoms of peritonitis last, and at the same time we may cover the blistered surface under the poultices with a thick layer of mercurial ointment. As soon as there is some amendment, we should content ourselves with warm poultices with or without a little laudanum, a strengthening regimen, and steel. On the day on which the catamenia should appear we may apply to the cervix from two to four leeches, to induce the flow of the menses and the absorption of the effused blood, of which probably little now remains. But if the menses are delayed, then the hæmatoceles may terminate in one or other of the various modes which I have pointed out at length in the preceding Part when describing intra-pelvic effusions of blood supervening on menstrual retention. When discussing these I went so thoroughly into their various modes of development that I need not here enumerate the symptoms of these blood tumours, nor the indications of treatment to be followed according to the way which they terminate. Moreover the indications of treatment are very much the same in the last stages of all the varieties of hæmatocele, whether they result from rupture of a genital organ or from disturbance of the menstrual function, either as regards its excretion or its secretion; the last two varieties are the only ones which now remain to be considered.

IV.—Hæmatoceles symptomatic of difficult menstrual excretion.

I may refer for a description of this kind of hæmatocele to the preceding Part, p. 74, in which I have collected a number of cases, in order to demonstrate not only that defect in menstrual excretion may be the cause of effusion of blood within the pelvis, but also to urge the practical importance of studying dysmenorrhœa by showing the possibility of such an event, even though it be exceptional. The opinion I put forward in my memoir of 1848 I need only now strengthen by an increased number of cases and bibliographical references, and in spite of the strictures of M. Nonat, I maintain that this is confessedly the opinion of M. de Haller, who in three different

chapters* speaks of the passage of blood from the uterus through the Fallopian tubes, into the peritoneal cavity: and not of menstrual blood only but of the lochia also.

In the case detailed below which was admitted into the *Hôpital S. Antoine*, under the care of M. Proust†; death took place at the instant when the blood began to flow back from the uterus into the

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* Haller. *Elementa physiologiæ corporis humani*, 2e edition (la bonne), Lausanne, 1778: *Tome* vii., *livre* 28, *Muliebria*, sect. ii., § 31, *Tubæ descriptio*, p. 105, ligne 10.—*Ibid.*, sect iii, *Purgatio menstrua*, p. 149, ligne 9.—*Tome* viii., *livre* 29, *Fœtus*, sect. iv., § 4. *Uteri contractio*, p. 455, ligne 11.

† Case by M. A. Proust:—

Severe icterus occurring at the fifth month of a fourth pregnancy; abortion and excessive metrorrhagia; coma, and death twelve hours after. Post-mortem examination—uterus and Fallopian tubes filled with blood; tubar mucous lining healthy, except at the ostium uterinum, where, together with that in the uterine cavity, it was ecchymosed.

V. R., aged 28 years, admitted April 11, 1860, into the *Hôpital S. Antoine* suffering from jaundice. Had always enjoyed good health. Married four years, and had three children. On admission, was pregnant at the fifth month. Four weeks before she was greatly frightened, and since then she has suffered severe pain on the right side over the liver, three days ago jaundice came on; at first she seemed none the worse for this, but the day before admission she was taken very ill, with vomiting, rigors, malaise, &c.

On admission she was almost insensible, the pupils dilated but contractile, the skin everywhere jaundiced and in some places ecchymosed. The liver was diminished in size. Respiration difficult. Mucous râles all over the chest. While in a state of coma she vomited blood to the amount of thirty or forty ounces. Soon after this premature labour came on, and was attended by a good deal of hæmorrhage, which recurred once or twice, and from the effects of which she died.

Post-mortem examination forty-two hours after death.—The brain, heart, and lungs were fairly healthy, except that the latter were somewhat gorged and but slightly crepitant. The peritoneal cavity contained some serum. The liver was scarcely more than half its usual size, soft, and very red. The gall-bladder was full of viscid bile. The stomach and intestines were ecchymosed. The kidneys healthy. The bladder was full of a thick red fluid like blood, its walls blanched. The uterine cavity and Fallopian tubes were filled with bloody coagula, and the mucous membrane except the outer half of the tubes, was much ecchymosed and injected, the same state of things was apparent on the peritoneal surface. The ovaries were healthy, but the broad ligaments were similarly injected.

Fallopian tubes. After death a clot of blood was seen filling the uterus and prolonged right and left through the uterine orifices, which were ecchymosed just like the uterine cavity, as far as the half of each Fallopian tube, both of which were healthy.

I need make no comment on this case, for we can see plainly that the blood was furnished by the internal surface of the uterus and escaped into the Fallopian tubes: nor need I urge here the points of interest in the history of metrorrhagic hæmatoceles, which this case and those reported by M. Hélie present. I shall only now refer to the analogies between this case of M. Proust, and the case of metrorrhagic hæmatocele, published by Barlow, which I shall presently bring forward, and in which the effusion of blood within the pelvis was symptomatic of an attack of purpura, leading in the same way to abortion. In analysing this last case, which in 1839 excited a most important discussion in England,* we may compare it with the case of M. Proust, because in it the hæmatocele though imminent did not actually take place. In the same way too, we may compare the two cases reported by M. Hélie (in one of which the tubal plethora was associated with metrorrhagy and scarlatina, and in the other with small-pox) with the case of metrorrhagic hæmatocele and measles, which M. Scanzoni has reported.

But these cases only indirectly relate to hæmatocele from difficult excretion from which they differ in one important particular; viz. that the distension of the Fallopian tubes is only a passing stage in metrorrhagic hæmatoceles, and is not characterised by dysmenorrhœal pains: while in cases of menstrual retention the persistence of great pain, generally for a month previous to the effusion of blood, is of great assistance in settling the diagnosis. In fact, in hæmatoceles symptomatic of menstrual retention, the period which is characterised by distension of the Fallopian tubes, and occurs some time before the blood escapes into the peritoneal cavity, stamps these cases in a way by which we readily perceive that it is a case of intra-pelvic hæmorrhage from difficult excretion, and not hæmatocele

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* Barlow, Bright, Brodie, Burne, Johnson, Locock, Moore, Erasmus Wilson, in the *Lancet*, 1839-40, vol. i. p. 327, etc. I must here remark that in a foregoing note, I have erroneously stated that Bright accepted the theory of reflux of blood from the uterus; on the contrary, he believed that in that case the hæmorrhage took place into the peritoneum, and thence passed into the Fallopian tubes.

with sero-albuminous or purulent pelvi-peritonitis. Without going into details, which in the preceding Part I have minutely considered, I may say that this decision rests first, on our knowledge of the various circumstances which take place after the excretion becomes difficult, increasing in severity at each abortive menstrual period until the effusion into the peritoneum; and secondly, on the absence in the earlier phases of the disease of any external flow of blood, which in metrorrhagic hæmatoceles always takes place, and is the forerunner of pelvic hæmorrhage.

It is necessary, therefore, if we are not called in at the beginning of the disease, to trace out by long and minute questioning the chain of events as they happened before the peritonitis was developed, and we must not content ourselves with the evidence furnished merely by a physical examination, though this is without doubt, of great importance, much less so than that collected from the circumstantial history of the patient. I surely need not insist on the absolute necessity for an accurate inquiry into the patient's antecedents if we wish to diagnose any affection of the female genital organs. No one, I think, will dispute this, not even those who have taken so little account of it, that they have named as a disease what is only a symptom, as in the case of hæmatocele, and have worked out a pathological history which represents nothing. The barren results of the labours of those who disregard the antecedent history of hæmatoceles and the various causes which give rise to hæmorrhage into the peritoneum, is the best proof of the necessity of taking into consideration the circumstances connected with the hæmorrhage and which alone can furnish useful indications for treatment.

An acquaintance with these antecedents enables us to distinguish readily between hæmatoceles caused by difficult excretion, those which result from rupture of utero-ovarian varices of the Fallopian tube or ovary, and those caused by effusion into the peritoneal cavity of part of the secretion of the genital organs.

I do not make this assertion on my own experience alone, but on that of others, and particularly of Dr. Tilt, who takes the same basis as I do for his diagnosis, when he refers the production of a blood tumour, which he punctured, to difficult menstrual excretion, as in the case quoted below.*

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* Case by Dr. Tilt, *loc. cit.*, page 261.

Dysmenorrhœa; suppression of menstruation from a chill; symptoms of

But supposing that we have settled the first point, viz., that the hæmatocele is consequent on menstrual retention, the diagnosis is still imperfect, for we cannot lay down the prognosis and treatment, unless we discover why the excretion is faulty.

I shall not, however, go further into details now, nor point out the indications of treatment, which must vary according to the variety of the menstrual retention.

V.—Hæmatoceles symptomatic of morbid hypersecretion of blood in the genital organs, metrorrhagic hæmatoceles.

Under this fifth and last variety are included all those intra-pelvic hæmorrhages which are the result of a morbid discharge from all or part of the genital organs in the virgin state, some of the fluid being effused, accidentally, into the peritoneal cavity, while the rest escapes as metrorrhagia from the vulva. Hæmatoceles of this kind we may call metrorrhagic; a faulty nomenclature, perhaps, but one possessing some real advantages. They are almost always accompanied by an external discharge, and the effusion into the pelvis is only an accidental and additional phenomenon. Our attention is thus turned medically, to the pathology of the metrorrhagia rather than to the less important nosology of the pelvic clot or retro-uterine tumour. The flooding, like all discharges of blood, is only a symptom, it may be of various morbid conditions; we cannot therefore call this hæmatocele a disease of itself, nor is its title to that strengthened by the fact that relapses occur, just as happens in gout or rheumatism. The case

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retention; peritonitis; retro-uterine tumour; puncture and evacuation of two pints of blood; cure.

In 1845 I was consulted by the parents of Miss L., aged 25. She began to menstruate at 13, and had continued regular ever since, though menstruation was always attended with pain. It was after a severe attack of this kind that I saw her, and I then ordered twelve leeches to the right iliac fossa, to be followed by poultices. The next period was even more painful, she was bled to ten ounces, and twelve leeches were applied to the hypogastrium, followed by poultices and fomentations. She soon recovered from this attack, and it was then discovered that a tumour, the size of the gravid uterus at the fifth month, was situate in the middle of the pelvis. The vagina was compressed by it; micturition was difficult. The uterus was high in the pelvis, the cervix firm and fixed. The rectum was flattened, pushed against the sacrum, and defæcation was difficult. Fluctuation could be felt in the tumour. It was

taken by M. Trousseau* as a text for a lecture on the subject is too briefly related, but I agree with him that hæmatocele, like hæmoptysis, is only a symptom of a disease which, as the real cause of the hæmorrhage, must be studied by itself, as is the case with phthisis. It is far more important to diagnose the cause than the seat of the exhaled blood. Those metrorrhagic hæmatoceles, therefore, whose starting-point is the uterine cavity, of which Dr. Barlow's case is an example, and those whose origin is not so precisely determined, some assigning the Fallopian tubes, others the uterus, are placed in the same group. From whichever situation the flooding begins the treatment is in no way influenced thereby, for the morbid condition which gives rise to it demands our first attention.

The *first group* of metrorrhagic hæmatoceles comprises all those occurring in fevers, eruptive or continued, and in febrile conditions, *incertæ sedis*, such as purpura and black jaundice, which, like true fevers, may originate a hæmorrhagic diathesis and so cause floodings. Practically they are important only as rendering the prognosis more grave. The case of M. Scanzoni is a clear proof of the disastrous effects of such a programme as that of the Professor of Wurtzburg, and shows plainly that gynæcology must not be separated from medical pathology. Though brief, this case merits more attention than the author has given it, for he does not seem to have recognised its undoubted affinity to hæmatoceles.

Case XI.†—*Rubeola; bloody discharge from the vulva; peritonitis; death. Post-mortem examination; effusion of sixteen ounces of blood in the pelvis from the left Fallopian tube.*

A young girl, 22 years of age, while suffering an attack of measles,

no doubt an encysted tumour in the recto-vaginal pelvic cavity. The rapid improvement was evidence of the limited character of the inflammation, and negatived the idea of the fluid being purulent; so that it was probably a sanguineous tumour. A trocar was thrust into the posterior vaginal *cul-de-sac*, an inch below the cervix uteri. Two pints of black blood escaped, to the great relief of the patient. The discharge continued for some days, and the patient then gradually recovered. It is noteworthy that these cases have many points in common; they mostly arise from menstrual suppression; they are generally accompanied by local peritonitis, then a tumour forms in the pelvic cavity, which disappears while the containing blood is evacuated.

* Trousseau. *Gazette dès hôpitaux*, 22 et 29 juin, 1858, pp. 285, 298.

† De Scanzoni, *trad. franç., hemorrhagies dans le canal des trompes*, p. 312. Paris, 1858.

died during menstruation with acute peritonitis. On *post-mortem* examination hæmorrhage was found to have proceeded from the left Fallopian tube, which was distended to the size of the index finger and contained about two ounces of blood, partly fluid, partly coagulated. Though its abdominal orifice as much as sixteen ounces of blood had escaped into the pelvis.

As the state of the uterus is not described, we cannot be certain whether the Fallopian tube was the source of the blood, though we may suppose that the intra-tubal clot was not deposited there from the uterus, as in cases recorded by M. Hélie and M. Laboulbène. The three cases are quite analogous; except that in M. Scanzoni's the blood was really effused, while in the others it was only on the point of being so. These examples of hæmatocele occurring in rubeola, scarlatina, and variola, demonstrates that this accident may occur in any severe fever. Moreover we learn that hæmatocele, though it is more apt to happen at a catamenial period, may supervene later. In M. Laboulbène's case it was fifteen days after the period. Ovulation, therefore, though it may be a predisposing, is not always an exciting, cause; nor can we refer the development of hæmatocele to the act of menstruation either in these cases or in that of Dr. Barlow's, which I will now detail.

Case XII.*—*Abortion at the sixth month; metrorrhagia; purpura; abdominal pain and vomiting; death five days after the abortion. Post-mortem examination.—Subcutaneous, submucous, and subserous ecchymosis; effusion of blood into the peritoneal cavity; blood escaping from the Fallopian tubes.*

On the 12th of November, 1839, I read before the Medico-Chirurgical Society a paper, giving the particulars of a case of uterine hæmorrhage, in which the blood had escaped along the Fallopian tube. (Vide *Lancet*, vol. 1., 1839-40, p. 329.) As some have considered the title of that paper scarcely borne out by the facts, I have somewhat modified it, though I may add that it expressed the opinion entertained by all those who witnessed the case.

* W. F. Barlow. The *London and Edinburgh Monthly Journal*, x., 1841, p. 877.

The details of the case, which have not been published as yet in any journal, are, I think, of some practical importance. They are as follows:—

A young woman, aged 22, who was pregnant for the second time, aborted at the 6th month of gestation, a good deal of blood was lost; and the patient afterwards had an attack of purpura. She became exceedingly prostrate, and all efforts to restore her were ineffectual. She died five days after delivery. No note having been taken of the symptoms, I cannot describe them exactly, but it is important to mention that the patient had violent pain in the abdomen, and obstinate vomiting which could not be checked.

The patient was seen by Dr. Miller, Mr. Gibson of Chelmsford, and my father. I made the autopsy in their presence.

The skin was much marked with purpuric spots, especially about the face. The mucous membrane of the stomach and intestines were covered with spots, and there were some on the peritoneum and pleura. The heart, lungs, and liver were paler than usual, in short, exsanguine, and this was the condition of the body generally. The blood in the heart was very diffluent, and contained no coagulum.

A large quantity of blood was effused into the abdomen and pelvis, mostly coagulated, but partly fluid. At first it was impossible to say whence all this blood came, but on examining the pelvic viscera, solid coagula were observed protruding from the open orifices of the Fallopian tubes. The tubes themselves were filled with blood, and distended at a short distance from the uterus up to the distal extremity.

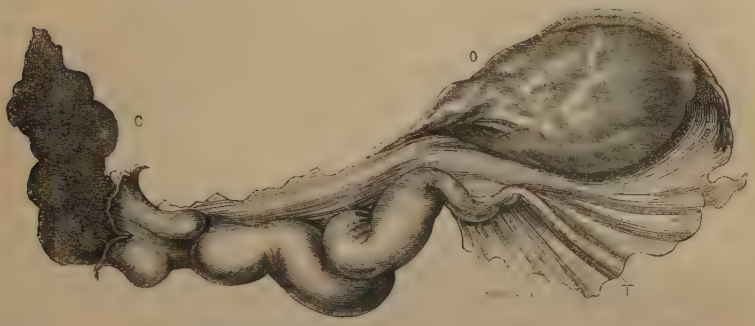
The condition of the parts is very well shown in the accompanying sketch (Fig. 5), which represents the sinuous state of one of the tubes, and the appearance of the clot attached: the latter has a sort of lobulated appearance, produced by the constrictions exerted upon it in its passage along the tube. The other tube was precisely the same.

The greater part of the blood found in the pelvis escaped from the tubes, no doubt in a fluid state, but that which was attached to the tubes was coagulated before it left the canal, as is evident from its shape.

The uterus was smaller than is usual a week after delivery. Its cavity presented nothing remarkable, except that a clot occupied part

of the cervical canal, and was situate over the orifice; it seemed also to have been compressed by it.

Fig. 5.



T. Fallopian tube. o Ovary. c. Clot.

Dr. Barlow in his remarks upon this case, says that oozing of blood from the Fallopian tubes is common in purpura, and that such hæmorrhage may be effused into the pelvis. He thus in 1841, announced the existence and mode of formation of hæmatocele: but as against its tubal origin, he urged that the quantity of blood was greater than could be furnished in this way. This objection, however, like that against the reflux of blood from the uterus on account of the smallness of the ostium internum, is of little weight, because the condition producing hæmatocele is a morbid one, and such a state may, as in Brodie's case (*Vide* p. 19), allow the ostium internum to dilate enormously. Moreover small patches of mucous membrane may furnish large quantities of blood, as M. Trousseau pointed out in the case of epistaxis.

A comparison of this case with others which have been recorded will strengthen Dr. Barlow's interpretation of it. In these latter we see the blood passing into the Fallopian tubes, their mucous membrane being sound, while that of the uterus is characteristic of the hæmorrhagic state. Again, in the cases of Drs. Barlow and Prost, we have metrorrhagia occurring after abortion; in the former, at the sixth month, under the influence of purpura, in the latter, at the fifth month with black jaundice. Death follows in one case in five days, in the other in a few hours.

The *post-mortem* examinations correspond perfectly with the symptoms. The two stages of the one affection being in Prost's case

plainly marked, the blood was on its way through the Fallopian tubes, its clot being attached to the uterine cavity. In Barlow's case, the oviduct was filled, and the blood was escaping into the peritoneum. Hence we conclude that a hæmorrhagic discharge from to the uterus, may be a cause of hæmatocele. It is also probable that the extent to which blood passes along the Fallopian tube is dependent on the duration and extent of the metrorrhagia, which is sometimes considerable, even before the hæmatocele takes place, as we see in the case quoted below.*

In the cases of Dr. Barlow and M. Prost the metrorrhagia followed abortion, so that menstruation had nothing to do with the hæmatocele. We must then consider that the pelvic effusion resulted accidentally from repletion of the Fallopian tubes, reaction being set up by the distending fluid. Looking also at M. Laboulbène's case, where tubal metrorrhagia occurred with variola fifteen days after the menstrual period, it appears that hæmorrhage from the genital organs

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* Obs. de M. Heurtaux, publiée dans la *Thèse de M. Voisin*, obs. xii. p. 116.

G., aged 38, was admitted into the *Hôpital Lariboisière*, August 17th, 1857. She had been ill two months and a-half. Ten days after a menstrual period she had an attack of hæmorrhage, which lasted twenty days. She then began to suffer hypogastric pains, which became so severe she was obliged to take to her bed. There were no rigors, vomiting, headache, nor fever. Two days after a swelling was felt in the pelvis, and then she had shivering followed by heat. Leeches and poultices were applied. The hæmorrhage stopped for a few days, but came on again, and was continued. She was very weak and anæmic; complained of vertigo, frequent and difficult micturition and constipation. The abdomen was tender on pressure, and there seemed to be two tumours, the one on the left, reaching as high as the umbilicus, and occupying the iliac fossa, was of cartilaginous hardness. The other on the right, not quite so large. Both were absolutely dull on percussion. *Per vaginam* they were round, moderately hard, projecting from the posterior wall of the vagina and nearly obliterating that canal. The cervix was pushed forwards and upwards behind the symphysis pubis. Ordered belladonna externally; opium internally.

Subsequently she was leeched and poulticed with benefit. The menstrual period passed without effect. At the end of a week œdema came on in the left leg and slightly in the right. A week after this the tumour had sensibly diminished in size, especially on the right, where there was much less tenderness; *per vaginam* the tumour was about the same, except that it was softer and apparently fluctuating. Mercurial inunction with belladonna was ordered. On the 23rd of September it was noted that the

independently of menstruation is sometimes the exciting and proximate cause of hæmorrhage into the peritoneum. It seems that from the cases quoted by Dr. Barlow and M. Prost that pregnancy and menstruation only act secondarily in the production of metrorrhagic hæmatocele in those cases where diseases such as variola, scarlatina, rubeola, purpura, black jaundice, &c., exist.

The term "catamenial hæmatocele," introduced by Trousseau, is therefore incorrect; at the same time I do not deny that hæmatoceles, like the "floodings" which take place in the hæmorrhagic diathesis, more frequently occur at a "menstrual" period than during an interval. But this does not prove that the physiological action, though a determining cause, is the exciting cause. Menstruation is not a disease ever ready when unexpected to cause a hæmatocele. Nor will relapses, even if they were frequent instead of being as they are very rare,* authorise such a conclusion.

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tumour in the left iliac fossa had almost entirely disappeared. She had had dysenteric diarrhœa for some days past. *Per vaginam* the tumour could not be felt. The patient was greatly exhausted. From this date to the 20th of October she continued to decline. The diarrhœa was almost incessant; bed-sores and abscesses formed and were opened. She gradually sank, and died on the 20th of October.

On making a *post-mortem* examination, the uterus was seen to be semi-rotated, and to be kept in its mal-position by adhesions to the rectum. At its left angle a small hard oval tumour was seen to be attached by its anterior and inner extremity; it was continuous with the Fallopian tube. Behind the uterus was a cavity, bounded below by the utero-rectal *cul-de-sac*; and above by the fundus uteri and rectum. It contained three diverticula, one towards the vagina, the others to the iliac fossæ. Its contents were principally altered blood. On incising the tumour before-mentioned, it was found to contain the same kind of fluid in a sort of vascular cavity. In front and to the inner side it communicated with the uterus. The fimbriated extremity of the left tube could nowhere be found, but by passing a probe along the lower extremity of the dilatation, it penetrated into the retro-uterine cavity before-mentioned. On the right the adhesions made it equally difficult to discover the Fallopian tube of that side, but when found, its cavity was also dilated, though to a less extent than the left. The right ovary could nowhere be found, but the left, flattened and indurated, was discovered in the midst of the adhesions. The rectum gave evidence of the dysenteric symptoms, but the other organs were healthy.

* M. Voisin (*Traité de l'hematocèle*, p. 242) quotes such a case, but without a bibliographical reference.

M. Trousseau declares in his lecture, that there is often a predisposition to these hæmatoceles, just as there is to gout or rheumatism. I am willing to admit it, and believe that there is generally some disease, either latent or active, of which the effusion is an accidental consequence.

But we need not enter upon the consideration of this predisposition, for it differs in each of the varieties of metrorrhagic hæmatocele, as a special disease, unknown before our time, and deserving a distinct place in nosology. The frequent recurrence of some morbid symptom shows, indeed, the existence of disease of some kind; but it does not make it necessary that that morbid phenomenon which is merely a symptom, should be erected into a disease *per se;* particularly when the metrorrhagia occurs in diseases, like chlorosis and anæmia, which are characterised by alternations of symptoms.

Nor should we confine our attention merely to the menstruation; we must seek a link higher up in the chain of events, and endeavour to find out the disease which is the cause of the perversion of the sanguineous exhalation. It is here, I think, that the predisposition which M. Trousseau very rightly considers of such great therapeutical importance is to be found.

The difference after all is not very great between M. Trousseau's opinion and my own. His judicious observations in the Chapter on the Treatment of Metrorrhagic Chlorosis by iron,* may be applied to metrorrhagic hæmatocele. Still less does my opinion differ from that of M. Puech,† so far at least as I can judge from the abstract idea which, though not precisely formulated, appears to be the foundation of his Paper on Hæmatoceles.

But to return now to the consideration of metrorrhagic hæmatoceles occurring in various pyrexial conditions. Their practical importance is unfortunately somewhat restricted, for the recognition of hæmatocele is, under these circumstances, only of value in reference to the prognosis which it seems indeed to make yet graver. In these cases, and especially in that brought forward by Dr. Barlow, we can readily recognise the relation which exists between the hæmatocele

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* Trousseau et Pidoux. *Traité de thérapeutique.*

† A. Puech. *De l'hæmatocele,* chap. v. p. 47 et suiv. Montpellier, 1858.

and the metrorrhagia, and between this latter and the disease which originates the hæmorrhagic diathesis. The following propositions seem to me clearly to flow from a consideration of these relations.

First, that in metrorrhagic hæmatoceles the effusion of blood into the pelvis occurs simply as a result of the distension either of one or both of the Fallopian tubes by a morbid excretion from the uterus, or from the uterus and Fallopian tubes together.

Secondly, that these hæmatoceles, though more frequent at the menstrual periods, do not necessarily depend on the catamenia flowing in a wrong direction, but they may originate in local hæmorrhage of any kind.

Thirdly, that whether supervening upon a period, or during the interval, they are only secondary phenomena, which may result from many and various diseases. The affection, therefore, is only a symptom, it cannot be considered as a distinct disease, and it does deserve the title of "catamenial hæmatocele."

It may be thought that these conclusions should have been postponed until we had discussed all the various pathological conditions under which intra-pelvic effusion, somewhat unfortunately called hæmatocele, has followed metrorrhagia; my object is to avoid the confusion arising from the term.

The *second group* of metrorrhagic hæmatoceles includes all those which occur in flooding after childbirth. I need not discuss Ruysch's opinion as to the possibility of the lochia passing through the Fallopian tubes into the abdominal cavity, which Fred. Hoffman,* Stahelin and Haller† admit, but Weiss,‡ Bandelocque,§ Jacquemier‖ and Scanzoni¶ reject. Those who object to this say that in these cases it is the rupture of some vein which escapes notice that gives rise to the intra-pelvic effusion. We will only remark that the cases of Dr. Barlow and M. Prost are in favour of the former

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* F. Hoffman, Opusc. *pathol. prat.*, p. 338, quoted by Scanzoni, *loc. cit.*, p. 313.

† Stahelin et Haller, *vide* Haller, *loc. cit.*, t. viii. p. 455.

‡ Weiss *in* Haller, *loc. cit.*

§ Bandelocque. *Traité des hémorrhagies utérines*, p. 80. Paris, 1831.

‖ Jacquemier. *Loc. cit.*, *Archives de méd.*, 3e série, p. 324.

¶ Scanzoni. *Loc. cit.*, p. 313.

opinion, and against the latter. The hæmatocele in the following case of Dr. West was not, I think, consequent on venous rupture. Though very laconic, the report is interesting as a puerperal case of effusion treated successfully by puncture.

Case XIII.*—*Premature labour; continuance of sanguineous discharge for six weeks; formation of retro-uterine tumour; puncture; cure.*

A married woman, aged 33, had an abortion, and exerted herself two days afterwards. At the end of six weeks the sanguineous discharge, which had not stopped since the miscarriage, increased a good deal, and continued for twelve weeks. At the end of that time a retro-uterine tumour the size of an apple was discovered. A puncture was made and a quantity of red fluid let out. A discharge of this kind continued for three weeks, and was followed by complete disappearance of the hæmatocele.

The brevity of the report forbids comment. We cannot determine whether the metrorrhagia resulted from abortion, or whether it was a symptom of inflammation occasioned by the exertions of the patient. Were the profuse lochia and consequent hæmatocele due to pelvi-peritonitis? We cannot tell. Suffice it to say that the case, at least, contradicts the assertion of M. Laugier, that abortion is not a cause of hæmatocele. It shows that the effusion of blood was, if at all, only indirectly connected with menstrual action. The discharge was persistent and profuse before the period, and was due either to the hæmorrhagic form of the miscarriage, or to the genital organs being morbidly affected by the exertions of the patient.

The *third group* of metrorrhagic hæmatoceles comprises the largest number of cases. This frequency arises from the fact of the comparatively frequent occurrence in young women of hæmorrhages symptomatic of peri-uterine phlegmons, which M. Nonat justly regards as a most important genital affection, inasmuch as the knowledge of it entirely regulates the study of gynæcology. Unfortunately, notwithstanding the efforts of M. Nonat and myself, the differential diagnosis of the complex affection to which I have given the name

¶ West. *Diseases of Women*, p. 452, 3rd ed., 1864.

of pelvi-peritonitis, is so difficult that it is impossible to state positively that the title of hæmatocele which has been given to it is legitimate. We can, indeed, only accept as positive proof the evidence of sight, when, the tumour being punctured, or having ruptured spontaneously, blood escapes. Hence it is, that while apparently rich in the number of such cases, we are in reality poor, from the want of more definite diagnosis. Still, I believe, that the two following cases, though insufficient to settle all the questions connected with this subject, are yet, so far as they go, conclusive as to their individuality as specimens of this variety.

Case XIV.*—*Abortion at second month. Abdominal pains eight days after. A month after utero-rectal blood tumour; incision; cure.*

R. G., age 35, admitted into the *Hôpital S. Antoine*, October 13th, 1848. She began to menstruate at 15, and was always regular. Has had four children after natural labours; six weeks ago she miscarried at the second month, and has not menstruated since; a week afterwards she had pains in the loins and thighs, a sense of weight in the back passage, and painful menstruation; she took an aperient, and blistered the abdomen. She has had rigors, colic, and nausea.

On admission she was pale, had a quick pulse, thirst, nausea, and abdominal tenderness; defæcation was impossible; and there was severe pain in the pelvis and rectum. A painful, slightly moveable fluctuating tumour could be felt *per vaginam* in the utero-rectal *cul-de-sac; per rectum* it could be felt anteriorly; the cervix was lifted up and pushed against the pubis. In the next few days the tumour became more and more apparent, more evidently fluctuating, the abdomen more tender and distended; the tumour was therefore punctured *per vaginam*, and a pint of black, viscid blood escaped; this materially diminished the tumour, and gave the patient great relief. A discharge of this kind of fluid continued for several days, a good deal coming away. On the 26th of November she left the Hospital well, having menstruated normally a fortnight before.

Case XV.†—*Menorrhagia following labour; sudden suppression and*

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* Viguès. *Thèse inaug.*, p. 49. Paris, 1850.

† Voisin. *Thèse citée*, obs. vii., p. 94.

symptoms of peritonitis; a fortnight after a large hæmatocele was discovered. Puncture, free discharge of blood per vaginam *three weeks after; cure of the hæmatocele, but persistence of the menorrhagia.*

L., age 31, admitted into the *Hôpital des Cliniques* May 2nd, 1856, under the care of M. Nélaton. She began to menstruate at 13, married at 15, had her first child at 16½, and has not been pregnant since. Since her confinement menstruation has been much more profuse, so that she has only been well eight days between; moreover, there has been a good deal of pain during menstruation on the right side.

Three weeks ago, during menstruation, she was seized with an acute pain in the right side of the stomach, and at the same time some clots passed *per vaginam*; soon after a tumour was observed in the right hypogastrium. On admission she was very anæmic, and was suffering acute pain like that of labour; the abdomen being too tender to admit of examination. An enormous fluctuating tumour was seen to occupy the hypogastric region, especially on the right side, and to extend into the pelvis; the vagina was short, the cervix uteri forwards; it was small and flattened. Behind, an elastic tumour, the size of an orange, and continuous with that felt in the abdomen, could be detected. The posterior wall of the vagina was of a violet colour. Leeches were applied to the anus, baths and opium were administered. On the 7th, the pain being very acute, the tumour was punctured, and a quantity of blackish, red fluid escaped; this gave instant relief, so much so that on the 9th the patient wished to go home. On the 15th the pain and the size of the tumour increased. On the 28th a large quantity of coffee-coloured fluid, upwards of a pint, escaped. On the 31st the tumour was very much smaller and less tender, and next day she left the Hospital. Not a trace of the tumour, which three days before had been so considerable, could be felt abdominally. On the 4th the cervix uteri was depressed and forwards; the fundus to the left. A firm, indolent, flattened mass could be felt *per vaginam*. The discharge continued during the next few days, and gradually became mixed with pus; ultimately it was merely serous, and finally it stopped, leaving the patient quite well. She was still subject to menorrhagia.

In the last case, the metrorrhagia and consequent intra-pelvic

effusion resulted, I think, from some old undetermined affection of the genital organs. Hæmorrhages are often due to the anæmia they induce, though the first of the series may have a purely local origin, and though remote and perhaps no longer in existence, patients are wont to attribute the subsequent discharges to the same cause. Similarly, we must not attach too great weight to accidental circumstances in the production of hæmatocele; the influence of excessive venery has been much exaggerated. It may probably cause floodings, and produce intra-pelvic effusion, but in these patients either the debauch brings into action some anterior disease, or they are constitutionally hæmorrhagic. These are important points in practice. We sometimes see hæmatocele supervene in that form of metrorrhagia which may be termed cachectic, as it comes on in diseases which deteriorate the constitution, and induce a tendency to hæmorrhage, the converse of that manifested in fevers. The anæmia which is very common in women who indulge in venereal excesses is of this kind.

The *fourth group* of metrorrhagic hæmatoceles are characterised by some cachexia, whether that be simple anæmia, the result of losses of blood or defective hygiene; or whether it be induced by chlorosis, hysteria, &c. The case of M. Aran comes under this head if we accept his diagnosis, but unfortunately we feel bound to object to it. The symptoms and the autopsy point to inflammation of the ovarian cysts and neighbouring peritoneum which followed venereal excesses, and was relieved by antiphlogistic treatment. M. Goupil* has published a similar case, and my friend M. Aran another,† though I regret that I cannot accept his

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* Goupil. *Bulletins de la Société médicale d'observation*, decembre, 1856.

† Obs. de M. Aran, *Leçons cliniques sur les maladies de l'uterus*, 3e partie, obs. xxi., p. 769.

A woman, 23 years of age, came under my care the 20th of August, 1857. She had lived a very dissolute life. She began to menstruate at 15, without pain; has had leucorrhœa ever since. On the 7th of August menstruation came on as usual. Being a prostitute she still had sexual intercourse, and on the 9th she had intercourse eleven times. After this she had severe pain in the hypogastrium, and in the evening a rigor. The two next days the pain was very severe, but it was less on the 12th, and again she had

interpretation of the symptoms: indeed if we could connect the hæmatocele with albuminous nephitis, we might add Bright's disease

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intercourse. This brought back the pain. Menstruation had stopped suddenly on the 10th, and she noticed that the abdomen was much swollen. Micturition became frequent and painful.

The day after admission she was feverish and in great pain; a tumour was felt occupying the right iliac fossa, and extending up to the umbilicus, but hardly going beyond the mesial line. It was round and moderately hard. The vagina was hot; the uterus was pushed forwards, upwards, and to the left against the pubis. A large swelling the size of the fœtal head was felt in the uterus occupying the sacral concavity; it was pasty and gave an indistinct feel of fluctuation. The uterus was fixed. She was ordered thirty leeches to the hypogastrium, and a castor and croton oil purge.

This gave great relief, and the tumour seemed to diminish in size and to be less fixed. The patient was extremely weak after the bleeding. Gradually the local symptoms subsided under the influence of antimony and some stimulants. On the 24th the pain returned, owing to menstruation coming on, and twelve leeches were applied. On the 26th she was much better; the tumour had to a great extent gone down; there was slight anteversion. On the 2nd of September she imprudently got a chill, and this was soon followed by smart rigors, fever, and pleurisy of the left side. So severe was the attack and so great the distress and difficulty of breathing, that it became necessary on the 9th to tap the chest, when about fifty ounces of serous fluid mixed with lymph were drawn off. This of course relieved her, but then symptoms of tubercle in the right lung came on. On the 20th of November it was impossible to discover the tumour or any deposit in the pelvis, and only a slight tenderness could be felt to the right and behind the cervix. She gradually sank.

On *post-mortem* examination there was found a good deal of purulent fluid in the left pleura. Tubercle at the apex of right lung. Commencing cirrhosis of the liver, and extensive Bright's disease. The colon and sigmoid flexure were united by adhesion to the uterus. At the upper and left angle of the uterus was a small cyst the size of a nut. The uterus itself was slightly anteflexed, with a deflexion to the left. There were two cysts of the left Fallopian tube; the fimbriated extremity of which was adherent to the rectum. The cyst at the left border of the uterus and those on the Fallopian tube were formed by false membranes on the peritoneal surface, and were filled with serum. On the right side the adhesions were more numerous and firmer, the uterine appendages being matted together with the other pelvic viscera; behind the round ligament was a small cyst filled with serum. In separating the ovary from the rectum a small serous cyst was torn open. The right ovary was not much altered. In separating the Fallopian tube from the ovary another small

to the list of those originating a hæmorrhagic diathesis, in which an intra-pelvic effusion of blood supervenes on metrorrhagia. The chain of events is well displayed in the following case, recorded with great care by M. Heurtaux :—

CASE XVI.*—*Menorrhagia following scanty menstruation ; anæmia ; six months after, symptoms of internal metrorrhagia ; after two days profuse sanguineous discharge, followed by relief ; four days after, hæmatocele ; admission into the Hospital ; three weeks after hæmorrhage by the bowel ; cure.*

C. B., aged 28, admitted into *Lariboisière*, October 19th, 1857 She began to menstruate at 16, and was at first regular, the period lasting five days; has had three children, her pregnancies and labours being quite natural. Has had no miscarriages nor other ailments. Always had good health in the country, but the last year while in Paris has not been so well.

In March last, the periods for some time before having been diminishing, menstruation came on and lasted three weeks, the discharge being abundant and clotty. There was no abdominal pain. From this loss she became very anæmic, and had leucorrhœa abundantly; this lasted for six weeks, when hæmorrhage again came on for a fortnight. This was followed by profuse leucorrhœa and chlorosis as before. In July she menstruated normally for four or five days; in August the same; in September *nil*; leucorrhœa and chloro-anæmia continuing. At the end of September, without any apparent cause, she was seized with violent abdominal pain, resembling, she said, that of labour. After this she experienced a great sense of weight in the pelvis, as if a foreign body were escaping through the anus or vulva, she frequently went to the watercloset, but without result. She had no rigors; but great heat of skin and nausea, but no vomiting. Micturition was frequent and difficult; defæcation painful. The abdomen was tender on pressure; she lost

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serous cyst was opened. The distal end of the Fallopian tube was distended with dark blood and pus. The uterus contained the same kind of fluid. The uterine mucous membrane was pale, except by the outer os, where it was very red. A small fungous growth existed in the uterine cavity.

* Obs. de M. Heurtaux publiée, *Thèse* de M. Voisin, obs. I. p. 111.

appetite, was thirsty; and became very weak; this continued for two days, then she had a free discharge of blood *per vaginam*, and this gave great relief. But again, without apparent cause, the pain returned more severely than before; again, she had nausea, but no vomiting, no rigor, great heat of skin and restlessness, micturition and defæcation as before. The least movement increased her suffering. The discharge of blood continued during all this time.

On admission, a round, firm tumour was felt in the hypogastric region extending nearly up to the umbilicus, the fundus uteri could not be distinguished from it. On the right it extended to about four fingers' width beyond the mesial line, but on the left it was even larger. Everywhere it was equally resisting and equally tender. *Per vaginam* a tumour could be felt occupying nearly the entire pelvic brim; in front of the tumour appeared a straight canal, at the bottom of which was the cervix flattened against the pubis; there was no fluctuation; fifteen leeches were ordered and opiate poultices. During the next four days she improved somewhat, but on the 25th she had more pain, was feverish and restless, bowels relaxed, tenesmus, pain in the iliac fossa. The vaginal discharge ceased.

November the 3rd.—The dysentery increased. On the 10th she was in great pain, and on going to the watercloset a considerable quantity of blood passed *per rectum*, after this the tumour was very much reduced in size. On the 11th the tumour had disappeared. The bowels were still relaxed and a good deal of blood passed. *Per vaginam* the cervix was felt in its normal position, the uterus was now somewhat moveable, and only a small hard nodule could be felt posteriorly. On the 24th the patient was discharged cured.

With this case we may compare that of M. Silvestre, quoted below,* and those which will be inserted in the description of symptoms special to this variety. The details of the case just recited are so

* Obs. de M. Silvestre, *Thèse de M. Voisin*, obs. viii., p. 98.

E. G., aged 24 years, was admitted into *Lariboisière* June 22nd, 1865. She began to menstruate at 14½ without any difficulty, and was always regular. She married in 1851, and had three miscarriages in three years. In 1853 she had her first child, and menstruated again in six weeks: she continued regular up to February, 1856, when menstruation stopped and

explicit as to render comment superfluous. The chain of events, after the patient's arrival in Paris; first, the diminished menstruation; then the menorrhagia, followed by marked anæmia, proves plainly that the hæmatocele was a symptom secondary to the constitutional changes effected by the new hygienic conditions of the patient's life.

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she thought herself pregnant. On the 25th of April menstruation came on again, and in the evening she experienced a good deal of bearing down pain in the loins and weight about the anus. This latter returned several times, and a physician who saw her cauterised the os uteri; this brought on a sanguineous discharge which lasted a fortnight. Early in June a tumour was discovered at the side of the vagina and in the right iliac fossa. She was admitted into Hospital June 22nd, 1856.

A hard moveable tumour was then discovered under the skin in the right iliac fossa, it was tender on pressure, about the size of an egg. The vagina was short; the cervix large, somewhat low and in front; the posterior *cul-de-sac* free to the left, but in the mesial line and towards the right, several boss-like masses were felt in connection with the uterus. From the 29th of June to the 7th of July the patient suffered a good deal of pain and tenesmus, the abdomen was tender on pressure, and there were slight symptoms of peritonitis. The tumour was accordingly punctured with a trocar in the iliac fossa, but no fluid came out. After this the pain diminished. On the 29th a fine trocar was introduced into the swelling felt *per vaginam*. A few drops of thick black fluid escaped, and a discharge of this kind continued during the day. Little or no relief followed, on the contrary pain and feverishness increased. On the 1st of August it was noted that she had passed a restless night, was in much pain, the abdomen was not distended but tender. Leeches were ordered, but no relief came. On the 2nd she was extremely prostrate, abdomen tender and swollen, vomiting coffee-coloured fluid. She died at mid-day.

Post-mortem examination twenty-four hours after.—About a pint of fluid ran out on opening the abdomen. The intestines were distended with gas and injected; the epiploon was attached to the uterus; the left kidney rested on the left sacro-iliac joint; the sigmoid flexure occupied the middle line below the sacro-vertebral angle. The uterus, somewhat enlarged, was situate in the middle of the pelvis. The bladder was normally placed. On the right side a tumour was situate in front of the broad ligament, it resembled an ovary as to form and size; below it was another tumour of similar size, also in the broad ligament. On examining the peritoneum it was found that after leaving the left kidney, which it covered, it passed over the sigmoid flexure of the colon and rectum, thence it passed on to a small tumour situate behind the uterus, thence to the fundus uteri. So that there was in reality no post-uterine *cul-de-sac*. In the middle line there was an opening in the peritoneum over the post-uterine tumour, and the fluid contained in the latter had escaped into the former. This tumour

This case and the one recorded by M. Viguès in the note below,* will serve as types of special symptoms.

M. Viguès was struck with the circumstance, and it is an important one in diagnosis, that women who are subject to floodings not unfrequently suffer from this kind of cachectic menorrhagic hæmatocele. In both the third and fourth varieties, menstrual action is

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was attached below to the base of the right broad ligament, it contained clots and a thick brownish fluid, and communicated with the tumour in the broad ligament The latter was situate just below the ovary on a level with the cervix uteri, its contents were the same as the one just mentioned. The closest scrutiny failed to discover in it any trace of an extra-uterine pregnancy, though M. Voillemier entertained that idea regarding it. It was the tumour in the recto-vaginal pouch that was discovered during life, and that was punctured with the trocar.

* Obs. de M. Viguès, Paris, 1850. Obs. ii. p. 7. *Fourteen pregnancies; metrorrhagia; abdominal pain on the 21st day; formation of an abdominal tumour; puncture; escape of blood* per rectum; *cure.*

A., aged 36, was admitted into the *Hôpital S. Louis* April 25th, 1850. She began to menstruate with some difficulty at 16; was married two years after, and since then she has always been either pregnant or nursing, having had fourteen children, three only of whom have lived; since the last child, two and a-half years ago, she has been quite regular. Two months ago, after menstruation, she had an attack of metrorrhagia which lasted twenty-one days, it was not however excessive. At last it ceased, and soon after she experienced pain in the abdomen, malaise, loss of appetite, sense of weight in the pelvis, great debility and constipation; a sanguineous discharge came on again, and a tumour formed in the lower part of the hypogastrium. She applied laudanum poultices, and on the 27th of April was admitted into the hospital, when the following was her condition:—Face, pale; great debility; abdomen distended and painful; thirst, hot skin, quick pulse. In the right iliac fossa was a tumour reaching as high as the umbilicus, it was only slightly moveable, dull on percussion, nonfluctuating. A groove divided it into two parts, the lower portion rising about six inches above the pubis, the upper portion about three inches higher. *Per vaginam* towards the fundus of the vagina and posteriorly, was a round smooth tumour the size of a billiard ball; on attempting to raise it the hand, placed externally, recognised the movement communicated to the mass in the abdomen; the vagina was so much narrowed that the finger entered its upper part with difficulty; the cervix was higher than usual and pushed against the pubis, slightly to the left. *Per rectum*, the tumour felt even larger than *per vaginam*, and fluctuation could be distinctly felt. She was ordered laudanum poultices to the abdomen.

May 1st.—The tumour was punctured *per vaginam* with a long trocar, and a small quantity of black fluid came away; the opening was then enlarged to about one and a-quarter inches, when a large quantity of thick,

often the only determining cause,* of the flooding, which, after a longer or shorter period, is effused into the abdomen, and forms the retro-uterine tumour. In both, venereal excess may be an occasional cause, so also may mental emotion, as is seen in the following case. Here the discharge of blood was effused into the pelvis after the menses had occurred, and probably came from the mucous membrane of the Fallopian tubes, for there was no metrorrhagia while the hæmatocele remained, and the sound showed that the uterus was unimpregnated.

CASE XVII.—*Pelvic affection occurring eight days after marriage; metrorrhagia five years after; hæmatocele from mental emotion at the end of the next menstrual period; cure.*

J. A., aged 31 years, was admitted into *la Pitié*, November 23rd, 1856. She had been married five years, but had no family. She began to menstruate at 16; but after two months it ceased for a

black, viscid fluid, like treacle, escaped; the walls of the cyst were felt to be thick. About six ounces of fluid escaped, but the tumour did not thereby appear to be diminished. On the 3rd the discharge became fœtid, chlorine water was then injected into the cyst. Her general condition was somewhat improved. On the 7th she had a rigor, followed by fever, and increased pain in the abdomen, especially on the left of the tumour. Ordered mercurial inunction, baths and poultices. On the 10th, after a bath she was taken with a sharp rigor, nausea, and vomiting; hot skin; quick pulse; diarrhœa. Ordered poultices and opiate enemas. This relieved the diarrhœa, but the pain continued. On the 12th, after severe colic, a good deal of black blood passed, like that which came after the incision, mixed with a little pus. The tumour was not diminished by it. Ordered mercurial ointment, poultices, laudanum enemas. On the 13th the hæmorrhage was repeated. On the 16th she was better in all respects. On the 20th the bowels were much relaxed, and a large quantity of dark fluid, resembling altered blood, came away; the abdomen thereupon became more supple and less tender; the tumour behind the uterus diminished in size, and the groove on the front of the tumour externally disappeared. On the 26th she was still improving; the vaginal discharge ceased; the abdomen became less painful, and on the 17th June she left the Hospital. There was then no trace of the tumour externally; the uterus had regained its normal position, and no trace of tumour could be felt there. She was seen a few weeks afterwards, and appeared to be in good health. Menstruation came on quite healthily, and there was no reappearance of the tumour.

* Case of M. Malgaigne, quoted in note, p. 117. Case of M. Fenerly, case xxxviii. p. 87. Case of M. Heurtaux, quoted in note, p. 212. Case xv. p. 217. Case xvi. p 221. Case of Silvestre, in note, p. 222.

year and a-half, during which time she suffered in her head, but had no abdominal or lumbar pains. At 18, menstruation returned abundantly and without pain, and she continued regular up to the date of her marriage, when she was 26 years old. At the end of the first period after marriage she was seized with severe pain in the abdomen, for which fifteen leeches were applied. She was ill, more or less, for three months.

Menstruation continued regular up to last September. In October, in place of the ordinary period, she had a profuse leucorrhœal discharge, accompanied by severe colicky pains. To relieve this she took a bath, and after this, the period, or at least a vaginal discharge came on. From this time she continued to suffer more or less in the pelvis and abdomen. On the 22nd of November, while exerting herself, she was seized with severe pain in the loins; but as yet there was no difficulty in micturition. That same evening she noticed that a tumour came quite suddenly in the hypogastrium; in the morning she had great pain and difficulty in micturition, and severe uterine colic, which continued up to the time of her admission though it was relieved somewhat by the application of twelve leeches.

The abdomen was painful and tender, especially over the lower part; it was also distended to about the size of the fifth month of gestation by a tumour which extended to about six inches above the pubis, also on the right side in the iliac fossa. It was dull on percussion. Auscultation revealed nothing.

Per vaginam, the cervix was felt behind the pubis. The os directed backwards; behind and below the cervix was a globular tumour extending more to the right than the left, it was soft, and distinctly fluctuating. On the 28th she was, and had been, much the same. Movement gave her great pain; an aperient which she took last night caused her some pain in its action. On the 29th she passed a bad night, had diarrhœa and was in much pain. No discharge from vagina; pulse 112; ordered decoction of rhatany; Seltzer water; and laudanum poultices.

On the 2nd of December she felt better, the diarrhœa had stopped, the abdomen was supple, and painful only on pressure. On the 4th, the tumour was about the size of the gravid uterus at the fourth month. The cervix was close to the pubis. The tumour behind the cervix was much less; the uterus itself was but slightly enlarged, and the examination gave very little pain. By combining vaginal examination with abdominal palpation obscure fluctuation could be felt.

Four leeches were ordered to the cervix; these bled freely, and brought the patient into a state of nervous excitement. On the 8th she was much better. The only noticeable change in the tumour was that its summit instead of being round, presented a sort of bi-horned condition.

On the 17th she was still improving, though slowly; the division at the top of the tumour seemed to be increasing, and now its lower vaginal portion seemed bilobed from before backwards. Any attempt to walk produced pain, and a sense of weight in the pelvis.

23*rd*. Since the 18th there has been slight diarrhœa, but no blood nor pus has passed. The abdominal tumour remains the same. The vaginal tumour feels hard, unequal, and resembles a very firm blood-clot; it is larger on the left than the right side. The cervix is normally placed; the os looking more directly backwards.

On the 3rd of January the tumour was more tender, and its left corner seemed certainly larger and harder; ordered four leeches to the cervix, and decoction of rhatany.

4*th*. The leeches bled moderately, giving some relief, and on the 5th the tumour was notably less on one side, the right; the cleft at the top was much more marked. Poultices continued.

10*th*. The patient feels much better, has no pain, the tumour is diminishing, the left side especially, and the surface has become irregular. The cervix is almost normally placed. The mid-portion of the retro-uterine tumour has disappeared. In the right *cul-de-sac* a hard round tumour can be felt separate from the cervix, and continuous with the right half of the abdominal tumour.

The next day the patient left the Hospital, and did not again return, though she promised to do so if pain came on.

It is unnecessary to discuss this case; the order of events, the sudden development of the tumour, and its varying consistence establish the diagnosis; and this though the contents of the tumour were not evacuated either artificially or spontaneously, but were gradually reabsorbed.

We will now look at the group of symptoms special to this variety of hæmatocele. The determining cause may be slight, as in the preceding case, it may arise from fatigue,* or there may be no deter-

* See the case published by M. Gallard. *Union médicale*, 1855, t. ix. n°. 134, p. 539, in which hæmatocele appeared after fatigue.

mining cause,* the hæmatocele appearing after venereal excesses,† or after abortion.‡

The symptoms peculiar to metrorrhagic hæmatoceles, and specially to the fourth variety, are a flow of blood externally, just when the hæmatocele is produced; slight peritonitis, so slight indeed, that M. Trousseau § doubted its existence; a cachectic and anæmic appearance; frequently recurring metrorrhagia a few days or hours after the hæmatocele forms, and continuing until reabsorption begins.

Generally the periodical exacerbations so marked in menstrual retention are here either absent, or of slight intensity.

I need not again urge the symptomatic importance of an external blood discharge prior to the hæmatocele, which with only one exception || appeared in all the cases. But attention should be specially directed to the slight sub-acute character of the peritonitis, set up by the passage of blood into the abdomen, in comparison with the effects of injecting blood into the pleura of a horse.

M. Trousseau denies the existence of inflammation of the serous membrane in the first stages of hæmatocele. This question I shall not discuss, nor whether blood pathologically exhaled from the genital mucous membrane is like the living blood circulating in the jugular vein. It is enough that M. Trousseau's opinion is invalidated by the case of M. Siredey, reported further on, where it is seen that an intra-pelvic effusion of blood becomes encysted by peritoneal false membrane before a retro-uterine tumour can be felt.

The discovery of this tumour thirty-six hours after the first symptom of mischief implies the existence of peritonitis in the earliest stage of the hæmatocele, and proves, in opposition to M. Trousseau, that when blood is exhaled from the genital mucous membrane and passes into the abdomen, inflammation of the serous

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* Case of M. Malgaigne, note, p. 117. Case of M. Heurtaux, note, p. 212. Case of M. Voisin, p. 218. Case of M. Heurtaux, p. 221. Case of M. Silvestre, note p. 222. Case of M. Viguès, note, p. 224.

† Case iv. of M. Voisin published in his Thesis, p. 84. As the diagnosis is questionable I have not detailed it. It seems to be a case of simple pelvic peritonitis, and not hæmatocele. See the case quoted in the note, p. 229.

‡ Case xxxv. p. 81, of M. Bourdon. Case xiii. p. 216 of Dr. West, and case of M. Viguès, note, p. 224.

§ Trousseau. *Gazette des hôpitaux*, 29 juin, 1858, p. 298, &c.

|| Case xiv., p. 217.

membrane is set up and is the cause of the sudden and acute pain. The result of M. Trousseau's experiments will account for the different intensity in the peritonitis, caused either by the living blood, to use his own expression, in ruptures; or by the dead blood in metrorrhagic hæmatoceles; or by both dead and altered blood in menstrual retention. We can thus understand the indolent character of some metrorrhagic hæmatoceles, when women have been enabled to pursue their occupations, or resume them after a few days' interruption, while fatigue has caused exacerbation and compelled immediate cessation. This very important fact was noticed by M. Nélaton before he unfortunately gave his sanction to the term hæmatocele which, from the confusion it has given rise to, we could wish disused.

The mildness of the inflammatory symptoms may lead us sometimes to confound these deposits with fibrous tumours. The difficulty of diagnosis is always very great, and is increased when the hæmatocele occurs at the change of life.* I need not again repeat the history of these obscure forms of intra-pelvic effusion; it is traced out in the case of M. Silvestre already quoted, and is shown in the description of hæmorrhagic peritonitis given in the foregoing chapters. Obstinate vomiting is much more commonly met with in this variety than in hæmatoceles, from difficult excretion. It seems partly to depend on the peritonitis, and partly on the nervous state of the patient, as may be seen in the case below.†

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* One case is referred too, on p. 112. Another case was seen by me at the *Hôpital S. Antoine*, under the care of M. Boucher; her age was 47.

† Case.—*Antecedent pelvic affection; metrorrhagia; hæmatocele twenty days after; cure.*

J. L., aged 20, admitted into *la Pitié* the 12th of March, 1859. She began menstruate without much difficulty at 14½. She was quite regular afterwards, but menstruation was always rather profuse, and after the age of 18 this loss began to tell upon her general health. Eight months after she was confined to her bed for a month with what she called an inflammation of the bowels and womb. I could not make out whether or not this was due to any abortion. On the 6th February menstruation came on with more than usual excess; it was accompanied with severe pain in the middle and to the right side, which gradually increased until on the fourth day she was obliged to take to her bed, where she remained six days, when the pain began to abate and she felt much better; she got up and went about and indulged in sexual intercourse, until, on the 2nd of

A peculiar kind of cachexia or anæmia has been noticed by many as of some value in diagnosis; but we must not overlook the share that frequent flooding antecedent to the effusion has in producing this state. Moreover peritonitis from any cause will give a cachectic look to the patient, owing to the pinched expression, and to the pale, wan, sometimes blueish or choleraic tint of face. This we must distinguish from the ordinary anæmic complexion caused by large

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March, without obvious cause that could be learnt, the pains reappeared much more severely than before in the same place, and accompanied by nausea and vomiting. Hæmorrhage, which had ceased, came on again more violently than ever without affording any relief; all these increasing she applied to be admitted into the Hospital.

She had then all the appearance of acute suffering; any movement caused her pain and provoked vomiting, she was feverish, thirsty, and had no appetite. The abdomen was somewhat enlarged at the lower part. The swelling was greatest in the right iliac fossa, extending up to within three or four fingers' width of the umbilicus; then it bent towards the mesial line, and after a slight curve towards the left iliac fossa it descended rapidly to the left inferior spine of the ilium. Palpation, which was very tender, especially in the right iliac fossa, showed that the tumour presented a pretty firm and uniform consistence. It was continuous with one felt *per vaginam* behind and to the right of the cervix; movement of the former being communicated to the latter; the cervix was small and pushed against the pubis. In the right posterior *cul-de-sac* a firm globular mass could be felt; the examination gave great pain.

Independently of this pain the patient constantly complained of a kind of twisting pain in the right side; the slightest movement, cough, and especially defæcation, increased it, and in the bath which she had the pain was excruciating. Ordered, decoction of rhatany, Seltzer water, and tannin, strychnia, cold poultices, and laudanum injections. 22nd.—The strychnia did not relieve the vomiting; the opium allayed the pain in part; the condition of the tumour remained about the same; the discharge of blood continued. On the 23rd she was better, pain less, abdomen somewhat less, discharge stopped. Micturition and defæcation were still painful. 28th.—She was slowly improving; the pain gradually diminishing, the sickness abating; the tumour seemed harder and certainly smaller. On the 6th of April the patient got up and was considerably better. Menstruation, though due, had not come on, but there was no sense of fulness or bearing down in consequence. On the 12th the improvement still continued, there was no pain except on pressing firmly in the right iliac fossa; the process of induration was very marked; the cervix was nearly normal both in shape and direction; the uterus was moveable. Menstruation had not come on. The patient was discharged with the understanding that she was to come back if pain or other symptoms came on; she did not appear again.

losses of blood. In the former we may use blood-letting boldly, while in the latter it is contra-indicated.

The difficulty of diagnosing the physiognomy of disease is at all times great, and is only to be learnt by studiously watching the patient; it is a subject which defies description, and so far as the affection can be learnt from merely written reports, we must trust to other symptoms which admit of fuller description. Of these the most important, perhaps, is the appearance of metrorrhagia before the hæmatocele; its return in abundance if it has diminished merely by the escape of blood into the abdomen; or, lastly, the continued flow of blood externally, if it has not been modified by the passage of a portion of the discharge into the abdomen.

But for this symptom to be of any value, we must be certain that the metrorrhagia existed in the first stage of the pelvic affection; because floodings may occur at different times in many affections of the genital organs which are liable to be confounded with metrorrhagic hæmatoceles, and may be met with, as I have said, at a late period in menstrual retention. It is necessary also to distinguish hæmorrhage by regurgitation from the discharge of blood which is characteristic of metrorrhagic hæmatoceles. We must note the time at which the metrorrhagia appears, the persistence and intensity of the expulsive pains in menstrual retention, their absence and irregularity in metrorrhagic hæmatocele: the dysmenorrhœal pains in the latter, as compared with the former, are like the labour pains of extra-uterine pregnancy compared with those of abortion.

The dysmenorrhœal pains in metrorrhagia occur either at the time of, or considerably before, the discharge; while the hæmorrhage of regurgitation in catamenial retention appears after the periodic recurrence of pain, during which time the womb was engaged in fruitless attempts to give birth, as it were, to the menses.

I need not repeat what I have so often insisted on, as to the existence of distension of the genital organs in menstrual retention, prior to the effusion into the pelvis, and its absence in metrorrhagic hæmatoceles. Nor need I speak of the monthly repetition of grave symptoms, especially the increase in the size of the pelvic tumour in cases of menstrual retention, which is so rare in metrorrhagic hæmatoceles, though in the latter menstrual action may cause a second effusion into the abdomen. I shall not dilate further on the diagnostic value of these different points. Authors have attached some importance to the periodical increase in retro-uterine tumours, according

as they have met with hæmatoceles from defective excretion or metrorrhagic hæmatoceles, and have mistaken the one for the other. For the distinctive signs afforded by the previous history, we may refer to the description already given.

If we set aside hæmorrhagic pelvi-peritonitis, the various effusions of blood into the abdomen may be ranged in three classes, and their principal points may be very briefly summed up.

1. Hæmatoceles from rupture of a blood-vessel, or of one of the genital organs. In these cases the intra-peritoneal effusion comes on without any premonitory signs, and is characterised by a group of symptoms due to the internal abdominal hæmorrhage.

2. Hæmatoceles, from defect in the excretion of the menses. Here symptoms of retention precede the peritonitis which is caused by the intra-pelvic effusion.

3. Hæmatoceles from a morbidly profuse exhalation of blood from the genital organs. In cases these the effusion comes on insidiously, and usually during a flooding; the peritonitis is not severe, and is accompanied by symptoms of prostration and anæmia.

The general indication for treatment is to stop the discharge of blood by the ordinary anti-hæmorrhagic means. The special indications vary according to the exciting cause. In fevers, when the hæmorrhage is a grave symptom, we apply cold to the belly and exhibit acid drinks with cordials and diffusible tonics. We must be very guarded in taking blood in these cases in spite of the acute peritonitis. While, on the contrary, if we find that old-standing disease of the genital organs has been suddenly roused into activity, we may bleed at the commencement of the hæmatocele, but we must not repeat it, on account of the anæmic condition of the patient.

In cachectic metrorrhagic hæmatocele, if the acuteness of the peritonitis at the first moment of effusion indicates leeches, they must not be re-applied until the next menstrual period. In the meantime we should prescribe absolute rest, opiates, poultices, first cold and afterwards warm, laudanum injections, and internally rhatany and tannin, followed by the judicious administration of tonics. If the vomiting, nervous excitement, and especially the painful tympanitis, do not yield, opium should be pushed to narcotism. M. Nélaton punctured in the case before quoted (p. 218), but this in my opinion ought not be done. If the painful distension increases at the approach of the menstrual period, we may on the day it is due, apply leeches to the cervix. When the first period has passed without mischief, we

must give iron, use the wet sheet, and good diet, and every third day from half a drachm to a drachm of quinine. M. Trousseau thinks this a specific. I cannot agree in this, though I do believe it to be the most suitable drug in the anæmic cachexia peculiar to women with metrorrhagic hæmatocele.

Let me add in conclusion, that the succeeding Part is entirely written by my friend M. Goupil, my own participation in it being quite insignificant, while, on the other hand, the responsibility of the two preceding Parts rests entirely with myself.

PART III.

ON INTRA-PELVIC HÆMORRHAGES OCCURRING IN EXTRA-UTERINE PREGNANCIES.

CHAPTER I.

CAUSES AND VARIETIES.

Those intra-pelvic hæmorrhages which supervene on uterine pregnancy I shall pass by, not only because they belong to obstetrics, but chiefly because, with the rare exception of ovarian apoplexy* or rupture of the Fallopian tube,† they are caused by rupture of veins‡ and are thus pathologically referable to Thrombus. M. Deneux§ has worked out this subject so well that I can add nothing to it.

I shall here confine myself to the history of intra-pelvic hæmorrhages symptomatic of extra-uterine pregnancy. The subject is one of great importance in gynæcology, on account of the difficulty in diagnosing pregnancy itself, the early stage of gestation at which this accident occurs, and its frequency. That these effusions of blood are seldom encysted is due to their rapidly fatal termination. Some may refuse the name of hæmatocele to these collections of blood during the first stage, while they allow it in the second; but we

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* A. Chereau. *Mémoires pour servir à l'étude des maladies des ovaires*, p. 169, &c. Paris, 1844.

† A. C. Baudelocque. *Traité des hémorrhagies internes de l'utérus*, p. 166, obs. lxii. Paris, 1831.

‡ M. Jacquemièr has quoted four such cases. Md^me^. Lachapelle has once seen rupture of a varix of the ovary during labour ending fatally. (*Pratique des accouchements*, t. iii. p. 86, note.)

§ Deneux. *Recherches pratiques sur les tumeurs sanguines de la vulve et du vagin.* Paris, 1835.

must not split a pathological phenomenon in this fashion, and while we give a name to the hæmorrhagic clot, pass over the first stage of its formation, which is quite as well worth recognition as the second. Indeed, the history of the pelvic clot is of secondary importance, compared with the determining the source of the hæmorrhage, which in cases of extra-uterine gestation often ends in death.

So frequent is the occurrence of intra-pelvic hæmorrhage that I have made an analysis of forty-two of my cases, which, if not quite complete in their histories, are irrefutable as to their diagnosis, because I have carefully eliminated all those which either do not appear to me to merit the title, although they have received it, or those which are, for any reason, at all doubtful,* or those which may be otherwise explained.† The forty-two cases may be classed under five heads:—

1. Hæmorrhage caused by the rupture of dilated utero-ovarian veins. This kind of hæmatocele occurring sometimes in extra-uterine pregnancy, may be said to represent one of the varieties of thrombus in normal gestation.

2. Hæmorrhage caused by rupture of the ovary: this we see happen in cases of pregnancy, whether the product of conception occupies the uterus or not.

3. Hæmorrhage caused by rupture of the Fallopian tube.

4. Hæmorrhage from the fœtal cyst itself having ruptured. The largest number of cases fall under this last head; both it and the next are of special interest, because they are peculiar to extra-uterine pregnancy, while the three former belong also to intra-uterine pregnancy.

5. Hæmorrhage within the fœtal cyst, which may end in death without effusion of blood into the peritoneal cavity, and therefore may not produce a real hæmatocele.

A sixth variety might have been made in which effusion of blood results from simple hæmorrhage of the Fallopian tube; but it would rest on only one observation, and that an imperfect one. The fœtus in that case was not found, and extra-uterine pregnancy was based only on the opinion of M. Robin that a certain membrane presented the appearances of the chorion. M. Fenerly has published the case in his *Thèse Inaugurale*, p. 46, Paris, 1855.

* Obs. de M. Piogey. *Thèse inaugurale de M. Viguès*, p. 26. Paris, 1850.

† Obs. de M. Ménière. *Archives générales de médecine*, t. xi. p. 169. Année, 1826.

A patient was admitted with subacute peritonitis, which terminated fatally in ten days. The uterine walls were thicker than normal. The right Fallopian tube contained a clot as big as an egg, which was hollow, and lined by a membrane, yielding microscopically the characteristics of the chorion. The uterine cavity was lined with a swollen vascular mucous membrane.

I ought then in strictness to omit all mention of this variety, but it is of the greatest importance in the differential diagnosis of hæmatoceles in the non-pregnant condition, as we shall presently see.

I shall at the outset pass in review each variety, point out and bring together the cases belonging to each, which will help us to follow up the differential diagnosis between hæmatoceles in the non-pregnant state, and intra-pelvic hæmorrhages symptomatic of extra-uterine pregnancy; this indeed is the real aim I have in view.

Section I.—Intra-pelvic hæmorrhage from ruptured utero-ovarian veins.

Under this head I have but one case of undoubted rupture of the ovarian veins occurring during extra-uterine pregnancy, though I have met with five examples of venous rupture occurring during normal pregnancy. The following case, borrowed from Ollivier (d'Angers), leaves no doubt on the point.

Case I.*—*Metrorrhagia for six weeks, followed suddenly by abdominal pains, syncope, and symptoms of internal hæmorrhage; death in seven hours; post-mortem examination; enormous clot filling the pelvis; dilatation of the uterus; tubal gestation; rupture of ovarian veins.*

P. V., aged 28, had an attack of hæmorrhage at the beginning of April, for which she consulted a quack; but in spite of his treatment the hæmorrhage went on, and on the 9th of May she suddenly experienced all the symptoms of internal hæmorrhage. Treatment was of no avail, and in seven hours she was dead. At first it was thought she had died of poisoning, and an examination was ordered.

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* *Mémoire sur un cas de grossesse tubaire avec quelques observations sur une cause particulière d'hémorrhagie chez la femme* (*Archives générales de médecine*, 2e serie, t. v. p. 403).

At the *post-mortem* examination the abdomen was enormously distended, especially in the hypogastric region. On opening the abdomen a large quantity of black blood escaped; the pelvis was filled with an enormous clot, weighing about four pounds. Above the right ovary was an ovoid tumour contained in the tube of that side, and measuring about two or three inches long and one in diameter. The fimbriated extremity of the Fallopian tube was quite closed, and seemed as if all its fimbria were joined together to form one ovoid mass; the rest of the tube was free, and rather larger than that of the opposite side. Cutting into the tumour before-mentioned, I found a mass, having all the appearance of a small placenta. In the middle of it there was a small cavity, lined by a very delicate membrane, and containing an embryo about the size of a five- or six-weeks' conception. I could find no vestige of umbilical vesicle; the right ovary was larger than the left, was surmounted by a large vesicle containing a white glairy liquid, and a yellow body in the middle. The uterus was only a little enlarged, but the cervix was a good deal elongated, and the cavity filled with mucus. The walls were pale, and not a trace of decidua could be found. In the substance of the broad ligament, as in the right tube and ovary, was a venous plexus filled with blood. The veins freely anastomosed, and a varicose condition was observable in them; one of them was the seat of a small rupture, from which the fatal hæmorrhage had escaped. Nothing of the kind existed on the opposite side.

In concluding this case, Ollivier (d'Angers) insists on the existence of tubo-ovarian varices; on their rupture, the recognition of which he assigns to Chaussier; and, lastly, on the intra-peritoneal blood-effusions which result from this rupture, especially in cases of pregnancy. There are some points in this case which are of interest in reference to diagnosis; for instance, the enfeebled condition of the patient, the existence of metrorrhagia for nearly a month before the symptoms of internal hæmorrhage; and, lastly, at the *post-mortem* examination, the elongation of the cervix uteri, and the distended uterine cavity filled with red-coloured mucus.

Section II.—Intra-pelvic hæmorrhage from rupture of the ovary.

The details just referred to in the preceding section are of special interest in a diagnostic point of view; though it may not be possible to distinguish them in every case.

The following is a remarkable example of apoplexy of the ovary, with rupture of this organ and consequent hæmatocele, occurring in a case of extra-uterine pregnancy, and coincident with hæmorrhage in the interior of the fœtal cyst. This case will serve as a type of our second variety.

CASE II.*—*Intra- and extra-peritoneal hæmorrhage; extra-uterine gestation; obliteration of the Fallopian tubes; metrorrhagia; death with symptoms of subacute peritonitis; post-mortem examination.*

G., aged 32, was admitted under the care of M. Nonat, September 3rd, 1855. She had always been regular, and had one child nine years ago. Menstruation being delayed a fortnight, she was taken with rather severe hæmorrhage, which lasted fifteen days, but was not at first either excessive or painful; what pain she had was on the right side. On the 31st of August the hæmorrhage increased a good deal, and became clotty; the abdomen also became tender; but on the 2nd of September it was acutely painful, and on the 3rd she was admitted. When seen next day she stated that from the delay in the period she thought herself pregnant, and regarded this loss as an abortion, though she had seen no trace of an ovum. The right side was the most painful. The abdomen was distended, and very tender on the slightest pressure; it was resonant on percussion. The vaginal examination was also very painful; the cervix was open; the uterus was pushed somewhat to the left and forwards by an enormous swelling, which was behind it; it was also depressed to the right. The posterior *cul-de-sac* was occupied by a fluctuating tumour, *per rectum* the pelvic tumour was felt filling up the pelvis entirely, and fluctuation was very distinct. The patient was sick, and both micturition and defæcation were painful and difficult. The diagnosis arrived at was, intra- and extra-peritoneal blood tumour, probably accompanied by extra-uterine gestation. Ordered mustard to the hands, and laudanum poultices. She gradually grew worse, and died on the 6th.

Post-mortem examination forty-two hours after death.—In the peritoneal cavity above the pelvis three or four glasses of black fluid

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* Fleuriot. *Bulletins de la Société anatomique de Paris*, 30e année, 1855, p. 399 published also by *M. Nonat* in his *Traité des maladies de l'uterus*, p. 863.

existed. All the pelvic organs were found matted together by large clots, but the coagula were largest in the posterior *cul-de-sac*, and pushed the uterus forwards. The amount of blood was estimated at about twenty-four ounces. When it was removed an ovoid tumour was observed to the right, and in front of the uterus, covered by the peritoneum of the broad ligament. It seemed to be formed by a mass of blood. The cervix uteri was dilated, the uterus normal. In the centre of the right Fallopian tube were some coagula directed towards the ovary; the ovarian region was occupied by the enormous ovoid semi-fluctuating tumour above referred to as a mass of blood. This was divided obliquely into two portions by a groove; its weight was about twelve ounces. At the bottom of the left recto-uterine *cul-de-sac* the peritoneum forming the posterior layer of the broad ligament presented a perforation with communication between the recto-vaginal *cul-de-sac* and the cellular tissue separating the peritoneal layers of the left broad ligament. The Fallopian tubes were impervious; in the left was a small fluctuating tumour, the size of a nut, containing a reddish-brown liquid. At first we mistook this for the left ovary, which in reality was lower down, and posteriorly. A small cyst also existed in the right Fallopian tube, which was quite impervious. It was clear that in this case the metrorrhagia came entirely from the uterus. On making an incision into the larger tumour a small fœtus was discovered; the head, trunk and anus being well developed. The tumour on the right side was fibrous, and had nothing to do with the collection of blood in the pelvis.

In reference to this case I may remark that, like the preceding, it is an example of hæmatocele occurring during extra-uterine pregnancy, though at first that condition seemed only to have been a predisposing, not an exciting, cause, since the hæmatocele was the result of apoplexy of the ovary, on the side opposite to that in which the extra-uterine pregnancy existed. Far from trying to lessen the value of these facts, we may see how they bear out the opinion of those physicians who would group together hæmatoceles during the unimpregnated state and those coincident with extra-uterine pregnancy. But we can hardly affirm that the part played by pregnancy in these cases is merely that of a predisposing cause. It was, indeed, the sole cause of the metrorrhagy, which, in the one case, commenced a month, and in the other three weeks, previous to the hæmatocele. In both there was considerable congestion, and, when at its

height, it occasioned in one case venous rupture, in the other ovarian apoplexy, and in both intra-pelvic blood effusion. It would indeed, be very illogical not to refer this last circumstance (blood effusion) to the congestion consequent upon the extra-uterine pregnancy, for there was no other circumstance which could be regarded as a determining cause.

Any further doubt as to the legitimacy of my classification will be readily dispelled on reading the numerous cases in which intra-pelvic hæmorrhage has been directly and unquestionably caused by the rupture either of the Fallopian tube or of the fœtal cyst itself.

I shall now take leave of this theoretical discussion, in order to consider the special symptoms of this case, the careful study of which supplied sufficiently precise indications to enable M. Nonat to make an exact diagnosis. I must admit that I have not always had the same good fortune in the cases which I have taken as the basis of these remarks.

In the first place I may observe that we have in this case the principal steps in the history of extra-uterine pregnancies and hæmatoceles, evident both during life and after death. During life we find first, the delay in the appearance of the menses; then constant metrorrhagy comes on, though not perhaps very profuse, and without any very marked pain beyond a peculiar tenderness in the right side and lower part of the belly; besides these there were the general indications of pregnancy which were sufficiently marked for the patient's guidance if she had already borne a child. The symptoms referable to hæmatocele were the last to appear, viz., increase in the loss of blood, with expulsion of clots coming on at the time of the menstrual period, acute pain in the lower part of the belly, enlargement of the abdomen, nausea and vomiting, difficult micturition and defæcation. Lastly, the physical signs which were established, viz., a tumour in the right side (the fœtal cyst) which pushed the uterus towards the left; and a fluctuating retro-uterine tumour which kept the uterus close against the pubis.

At the *post-mortem* examination we find, besides the tubal or sub-pelvi-peritoneal pregnancy as the seat of hæmorrhage, the rupture of the left ovary and the effusion of blood into the peritoneum; lastly, we find the uterus increased in volume and its cavity enlarged; lesions which ordinarily accompany extra-uterine pregnancies. I have deemed it right to lay stress on these particulars, which

will be frequently met with in the following cases, because they are, in my opinion, important guides to diagnosis.

But before we leave this subject I must notice two cases in which the fœtal cyst exerted only a remote influence in producing the hæmorrhage. One of them I shall quote farther on, it was observed by Duverney, and is of great interest in a diagnostic point of view. The second, by Dr. Payan,* is briefly described below. In it, as in the case of Duverney, the cause of the hæmorrhage was not quite determined.

Both these cases might, perhaps, be referred to my first division, viz., to hæmorrhages produced by rupture of veins ; for in the case mentioned below there is an account of very laborious work, and in the case of Duverney there was a history of hæmorrhages. This hypothesis is the more plausible because in both the integrity of the Fallopian tubes, of the ovaries, and of the fœtal cyst was observed. It is better, however, to recognise the gap rather than put a forced construction upon the facts as reported, in order to avoid the charge of keeping back any case in which the hæmorrhage appears dependent on extra-uterine pregnancy, without being either the proximate or efficient cause.

The case will be more complete if we compare it with that of Dr. Pollard,† in which the left ovary was as large as an apple, and its cavity, which was filled with blood, communicated by a narrow opening with the abdominal cavity. But though we can hardly, from these brief details, conjecture the real nature of the ovarian lesion, we may, I think, class it with intra-pelvic hæmorrhages caused by rupture of the ovary. In the case of M. Nonat there was extra-uterine tubal pregnancy on the right side, the tube being distended by the ovum, while a large clot had burst and allowed the blood to pour into the

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* Case of Dr. Payan (*Bulletin de l'Académie de médecine*, 1843). A labouring-woman, aged 32, became pregnant. One evening she was suddenly seized with sharp pain in the hypogastrium, went to bed and expired at 2 A.M. *Post-mortem* examination.—On opening the abdomen a great quantity of blood and clots were found enveloping the uterus and filling the pelvis. The uterus was as large as in the second or third month of pregnancy, its cavity was lined with a kind of false membrane ; the upper and left portion of the fundus was distended into a cyst, and the wall was so thin that the fœtus could be seen through it with its placenta attached above and behind.

† *Vide* note, p. 189.

abdominal cavity. Here then we have the rare example of intra-pelvic hæmorrhage supervening on tubal pregnancy, the hæmorrhage being caused in the first place by rupture of the ovary, thus bringing the case under the second head, and by rupture of the Fallopian tube, which brings it under the third head, that which includes the greatest number of cases.

Section III.—Intra-pelvic hæmorrhage from rupture of the Fallopian tube.

In the remaining three varieties, the starting-point of the intra-pelvic hæmorrhage is the fœtal cyst itself. In one the effusion results from the rupture of the cyst; in the other, the cyst without being ruptured causes by its development a partial rupture of the Fallopian tube. This, however, is not the only way in which the Fallopian tube ruptures. It would seem that occasionally it may, as in Dr. Pollard's case, be caused by the distension arising from a tubal hæmorrhage (and this has been seen both in the unimpregnated and in the pregnant), which compresses and deforms the ovum, while it so distends the Fallopian tube that it gives way at some spot which has become thinned or altered.

These different forms of the same pathological conditions have led me to separate these cases from those of rupture of the fœtal cyst with which they might have been confounded, both as regards their etiology, and, at least in some cases, as to the manner of rupture. This distinction appears the more legitimate, because, in the case of tubal, tubo-interstitial, and tubo-ovarian, or abdominal extra-uterine pregnancies, the blood-tumour is formed of blood alone, and does not contain either the fœtus or its membranes.

Not that this rupture is at all less grave than that of the fœtal cyst itself: for, in all the cases known to us, death has come on rapidly, in a few hours or days, before the effusion of blood has become encysted, even more rapidly than in the case where the rent being much larger has allowed the Fallopian tube to expel the fœtus and its membranes, and then to contract upon itself.

Usually this rupture appears to result from a severe strain or fall, as in the case which was admitted into *la Pitié* under M. Clement, in February, 1834, recorded by Professor Velpeau,* or in that pub-

* *Dictionnaire* en 30 vol. t. xiv. p. 405.

lished by Littre. This latter I report because the symptomatology is of sufficient length, and the details previous to the *post-mortem* sufficiently clear to enable us to refute the charge of inexactness, which certain writers have alleged. They suppose indeed that "a sharp pain is followed by profound calm, that the belly becomes flat, and that a gentle and equable warmth is diffused in that cavity."*

This description rests too much on the symptomatology of penetrating wounds of the abdomen; for with the exception of two cases very briefly reported by Sabatier,† we shall not find these signs either in the cases reported by Littre, or in any of the following:—

CASE III.‡—*Metrorrhagia, the result of a fall, occurring at the sixth week of gestation; symptoms of internal hæmorrhage; death three days after; post-mortem examination; blood effused into the pelvis; tubal gestation and rupture of the cyst.*

I was called to see the wife of a painter who was seriously ill. On my arrival I found her *in extremis*, with great dyspnœa, and small thready pulse. She was, however, quite conscious. I learned that she had not menstruated for six weeks; three days before she met with a fall, and six hours after she experienced severe abdominal pains, which lasted twenty-four hours without intermission; after this, a sanguineous discharge came on, but this had ceased three hours before my visit. She died three hours after.

On opening the abdomen a large quantity of black fluid blood was discovered. Having emptied the peritoneal cavity of this blood, I found that it had all proceeded from the left Fallopian tube, which had a rupture in it of about half-an-inch in length. The pain of which the patient had complained was at once explained. Examining the rupture more carefully, I found in the tube a round transparent

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* *Dictionnaire* en 60 vol. t. xix. p. 408.

† Observations de Sabatier (*Médecine opératoire*, 2e ed., t. iii. p. 279). Two women, arrived at the fourth month of pregnancy, were suddenly seized with acute pain, which lasted two to three hours, followed by a profound calm; faintings supervened, and they died. At the *post-mortem* examination, the bellies contained a large quantity of blood, and the fœtuses lay amongst the intestines attached by the cord to the ruptured Fallopian tubes, which were firmly contracted.

‡ Littre. *Mém. de l'Acad. des Sciences*, année 1702, p. 209. *Sur un fœtus humain trouvé dans la troupe gauche de la matrice.*

body, an inch and a-half in diameter ; this proved to be a fœtus and its envelopes. The placenta was attached to the interior of the tube and formed more than half of the whole mass. The walls of the tube were here very thick, and throughout, except at the seat of rupture, this tube was both thicker and larger than the other. The exterior walls were also thicker than usual, the cavity was full of blood.

There is no doubt that in this case the fall caused at one and the same time metrorrhagia and tubal hæmorrhage, and as the latter could not escape, it ruptured the diseased Fallopian tube. This seems the more likely, because just above the seat of rupture the tube was more dilated than the one on the opposite side, and no obstruction between the oviduct and its internal orifice was found, though carefully looked for.

The cause of rupture in the following case, taken from Duverney, is still more remarkable. The woman had at the same time tubal and normal pregnancy, and with the fatigue of dancing brought on a miscarriage which led to rupture of the Fallopian tube.

Case IV.*—*Metrorrhagia occurring at the 2nd month of gestation ; diarrhœa and vomiting ; abdominal pains, rigors, and extreme prostration ; death.—Post-mortem examination ; effusion into the peritoneal cavity ; rupture of the left Fallopian tube, which contained a fœtus and placenta ; second placenta in the uterus, with the cord broken.*

On the 4th July, 1708, I was called to see Madame G., aged 21. She had been married one month. She complained of a sense of great weight in the uterus, and severe pain in the limbs; she said she believed herself pregnant two months, and during the last eight days had had a discharge of blood from the vulva. Notwithstanding the free use of stimulants she gradually sank. I learned that while at the watercloset something had passed from her with pain, which I supposed was a fœtus, as I found on examination that the os uteri was open.

On opening the abdomen a large quantity of blood ran out. Examining the pelvis, I found that the left Fallopian tube was ruptured and contained a fœtus with its placenta attached to the wall

* Duverney. *Œuvres anatomiques*, t. ii. pp. 355-6.

of the tube, the vessels of which were much enlarged. I also found that the uterus contained a placenta alone, the cord of which was broken, showing that the fœtus had been expelled. On examining the tube I found the obstruction which had prevented the ovum passing on to the uterus.

The cause of rupture in this case being quite exceptional, I shall not lay much stress upon it. In the other examples, on the contrary, spontaneous rupture seems to have followed slow ulceration without any external cause.

In the case observed by Albers (de Brême) the patient was seized with acute pain immediately on leaving her bed. The details, unfortunately, do not give us the grounds on which Albers formed his diagnosis.

Case V.*—*Severe abdominal pain coming on at the 3rd month of gestation; symptoms of collapse; death the same day.—Post-mortem examination.—Rupture of the tube from extra-uterine gestation.*

Albers (de Brême) was called early in September, 1820, to a woman, who, at the 3rd month of gestation, immediately after getting out of bed, had been seized with violent abdominal colicky pains, felt especially in the umbilical region. She was cold, pale, the lips blue, the pulse small and frequent. She complained of extreme pain in and about the umbilical region. In this state she remained for six hours, when she expired. On *post-mortem* examination it was found that the cause of death was rupture of the right Fallopian tube, which contained a very small fœtus.

In this case the first symptoms were immediately followed by death, as, indeed, almost always happens, whether the cause be traumatic, as from a blow, a fall, or dancing, &c., or spontaneous, either from distension of the Fallopian tube, or ulceration consequent on inflammation, as happens in the case of certain aneurisms. Death seems to be due to the quantity of blood poured out; both Littre and Duverney speak of it as very great, and Velpeau has calculated it at many pounds. The amount of the hæmorrhage bears no relation to the extent of the rupture or perforation. In the cases which occurred spontaneously, the opening would hardly admit of

* Extrait de Dezeimeris. *Grossesses extra-uterines* (*Journal des connaissances médico-chirurgicales*, t. iv. p. 240).

the head of a pin or a grain of wheat, according to Santorini* and Dr. Köner.†

As death follows so rapidly in these cases that the hæmorrhage has not time to become encysted I need not dwell longer upon them. It is remarkable that in general death ensues even more rapidly in these cases than in those which constitute my next variety, where the fœtal cyst is ruptured, and the fœtus or placenta finds its way into the peritoneal cavity.

The symptoms here are very marked; there is horrible pain, clearly defined by the patient, then syncope, fainting, rigors, and lastly, all the signs of profuse internal hæmorrhage, followed rapidly by death.

Very often these signs follow an attack of metrorrhagia of varying duration, either after some traumatic cause or spontaneously. The patients generally believe themselves to be two or three months advanced in pregnancy. This is a point of great importance, which I shall again refer to in the cases which come under my fifth head.

Section IV.—Intra-pelvic hæmorrhage from rupture of the fœtal cyst.

The examples of rupture of the Fallopian tube which we have just studied belong either to the tubal, tubo-interstitial, or tubo-abdominal varieties of extra-uterine pregnancy. But rupture of the fœtal cyst, with intra-peritoneal hæmorrhage, may happen in all varieties of extra-uterine pregnancy, though the numerical proportions of each are very different. Thus, if we say that nearly every case of extra-uterine pregnancy ends by rupture of the fœtal cyst, we shall find, on taking each variety separately, that this termination is, in tubal pregnancies, almost constant; in certain ovarian pregnancies it is frequent; but in the pelvic sub-peritoneal, and tubo-ovarian forms it is very rare; and in tubo-abdominal, and true abdominal pregnancies it is quite exceptional.

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* Case taken from Bianchi *De naturali in humani corpore vitiosa morbosaque generatio*, p. 152.

† Case of Dr. Köner (extracted from Moreau *op. cit.*, p. 19). A woman died with symptoms like those of arsenical poisoning. At the *post-mortem* examination great effusion of blood was found in the abdomen to have issued from two apertures, hardly large enough to admit the head of a pin, in a tumour which was formed at the extremity of the left Fallopian tube. On opening this tumour a two months embyro was found; the uterus was triple its ordinary size, and lined with decidual membrane.

The rarity of this termination in the latter kinds induces me to transcribe the following case by M^me^ Lachapelle. Unfortunately we cannot, from the details of the autopsy, determine exactly whether the pregnancy was abdominal or tubo-abdominal, but the latter seems the more likely.

Case VI.*—*Extra-uterine gestation; spontaneous rupture; death.*

T., aged 24, pregnant for the second time at the 6th month, was admitted into the *Maison d'Accouchement*, November 2nd, 1816. At the 2nd month of gestation she had a fall, which brought on a discharge of blood from the vagina, this stopped and came on again several times. She also experienced abdominal pains, varying both in degree and duration. A surgeon whom she consulted, stated that she was not pregnant, that her symptoms were due to the absence of menstruation, and ordered leeches and medicines to bring it on. Not getting any better, she was admitted into the *Hôtel Dieu*, where the same opinion was given, and similar treatment was adopted. Not deriving benefit, she left the Hospital and came into the *Hospice de la Maternité*. On examination, the cervix was found to be normal. On its right side a large, immoveable, solid tumour was discovered. The pain and discharge of blood continued; the abdomen became more tender; the pulse was small and frequent; the extremities cold; and she died on the 4th of November.

On *post-mortem* examination, a considerable quantity of blood was found in the abdomen. In the right lumbar region was seen a male fœtus, well formed, and apparently at about the 6th month of gestation, its face was turned to the right side of the spinal column. In the umbilical and left lumbar regions, a thick, solid cyst existed, it was adherent all round; at its upper and right aspect there was an irregular rupture; in its interior was a fœtus with its envelopes entire.

In the right iliac region, and in the upper part of the pelvis, was the uterus, pushed on this side by the cyst. It was larger than normal, but otherwise presented nothing remarkable. The right ovary and tube were healthy. The left tube contained the fœtus, and the left ovary was lost in the general mass.

In this case we may observe from the outset the various compli-

* Madame Lachapelle. *Pratique des accouchements*, t. iii. p. 147.

cations which usually accompany extra-uterine pregnancies. The advanced period of gestation, six months, is also a point worthy of notice, for generally the rupture of the cyst takes place at the second, or before the fourth month. The difference in the time appears to depend on the greater or less distensibility of the cyst, and its development *pari passu* with the fœtus.

This distensibility of the cyst is still more apparent in tubo-ovarian pregnancies, though they seldom terminate in this manner. In the following case the rupture appears to have supervened on some special circumstances, and was not a natural or necessary termination.

Case VII.*—*Metrorrhagia following a blow on the abdomen during pregnancy; inflammation; death. Post-mortem examination.—Extravasation of blood into the abdomen; rupture of the cyst of a tubo-ovarian pregnancy.*

A woman, aged 32, mother of five children, received in the second week of her sixth pregnancy a severe blow in the abdomen, which was followed by syncope, and symptoms of inflammation, but not abortion. Metrorrhagia supervened, and hæmorrhage, under which the patient died.

At the *post mortem* examination a good deal of fluid and coagulated blood was found in the abdomen, and a fœtus of about ten weeks' growth. The fundus uteri rested against the pubis, and the cervix against the sacrum, the displacement being caused by a tumour situate on the left of the uterus. Violent inflammation had existed in the tumour which was formed by the ovary, the Fallopian tube, and the broad ligament. The fimbria of the tube were adherent to the ovary, the two having formed a cyst, the distension of which had ended in rupture.

It is difficult to decide whether the rupture of the cyst in this case was due to the blow on the stomach, or to the natural progress of the pregnancy, complicated by inflammatory action. But the likelihood of such a termination happening in this very rare form of extra-uterine pregnancy, is shown in the case of Reiss.†

Although the question of ovarian pregnancy is still unsettled, and

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* Thèse de M. A. Moreau, Paris, 1853, p. 13. From the *Dublin Journal of Medical Science*, 1833.

† *Observation consignée dans Moreau. Thèse*, 1853, p. 15.

even its existence contested, we may at any rate affirm that some of these cases have ended by rupture of the cyst and intra-peritoneal hæmorrhage, though we do not feel called upon to decide whether the fœtus was developed in the very tissue of the ovary,* or in the separated vesicle, or in the periphery of the gland which produced the germ.†

Case VIII.‡—*Severe pain occurring in the right hypogastrium at the third month of gestation; death. Post-mortem examination—fœtus found in the abdomen adherent by the cord to the right ovary, which was ruptured.*

A woman, aged 34, had had three children prematurely, and was pregnant the fourth time. The condition being accompanied by extreme prostration and a good deal of pain on the right of the pelvis. At the end of the third month she expelled *per vaginam* a mole, the size of an egg. Six days after this she experienced most agonising pain in the hypogastric region, accompanied by severe vomiting, and soon after this she died.

On examination a male fœtus was found in the right iliac fossa, but still attached to the right ovary by the umbilical cord. The ovary itself was ruptured on its under side. The organs on the left side were healthy. The uterus was much thickened, and large enough to admit a fœtus of three months: such an one was found in the abdomen.

The case of St. Moressy is quite analogous to that of Professor Ucelli; though the detailed symptoms are less complete, it seems to show quite as plainly that the ruptured fœtal cyst was formed at the expense of the ovary.§

These ovarian pregnancies are extremely interesting, they are not at all common, and they do not ordinarily terminate by rupture.

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* Dezeimeris. *Journal des connaissances médico-chirurgicales*, 1837.

† Velpeau, *op. cit.*

‡ *Bibliothèque médicale*, t. xxxviii. p. 265, et Dezeimeris, *op. cit.* p. 236.

§ Observation de M. de Saint Moressy, *medicin de Riberac en Saintonge*, 1662 (*dans Duverney, Œuvres anatomiques*, Paris, 1761, t. ii. p. 350).

A lady had borne eight children, when, after an interval of five years, she became pregnant for the ninth time. At the third month she became very weak, had colicky pains, with symptoms of approaching labour, and died in nine hours. On opening the abdomen a large quantity of blood was found effused, and in removing this a male fœtus about an inch long

Such is not the case, however, with tubal pregnancies; these are not only very common, for, according to Murat, Baudelocque saw five examples in three months; but they generally end by rupture of the fœtal cyst. This fact has long been observed, and some remarkable instances are quoted by Mauriceau* and Duverney†. As everyone has read of these cases I report two only, which seem to offer some special points of interest.

The first case is the only one I know of in which rupture of the Fallopian tube, and the escape of the fœtus into the abdomen accompanied by intra-peritoneal hæmorrhage, was followed by encysting of the fœtus together with the effused blood, in a word by a hæmatocele, and later by intestinal fistula; death not ensuing until six months after the commencement of these complications.

Case IX.‡—A woman, aged 20, was admitted into Guy's Hospital, suffering from very obscure and anomalous symptoms. She had been ill six months, but the last three weeks she had been much worse. Had passed a good deal of brown coagulated substance from the bowels. She had dyspepsia, and suffered from abdominal pain. She died seventeen days after admission. On *post-mortem* examination numerous adhesions were discovered, some of which were of long standing. On the left side these were so numerous, that they formed a complete cavity between the curve of the colon, the rectum, the bladder, and anterior and lateral walls of the abdomen; in this cavity a fœtus with its placenta was found of about three months' development. The cavity communicated by two openings with the rectum and iliac curve of the colon. The uterus was healthy and contained no chorion. One of the tubes formed a thin sac, in which the fœtus had evidently been developed.

In the following case, taken from the thesis of M. Siredey, we have, on the contrary, an example of rupture of the Fallopian tube in tubal

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was discovered. It was found afterwards that the right ovary was ruptured in its length, and that the fœtus had been developed therein.

* Mauriceau. *Des maladies des femmes grosses*, 5e edition, t. i. p. 86.

† Duverney. *Œuvres anatomiques*, t. ii. p. 512, 1761.

‡ Obs. *extraite du Journal des connaissances médico-chirurgicales*, t. v. p. 6. *Des grossesses extra-uterines*, par Dezeimeris; indiquée comme provenant de Bright, obs. extr. dans Froriep's *Notizen aus dem Gebiete der Natur und Heilkunde*, t. xxiv., *et Kleinert's Repertorium*, avril, 1830, p. 94.

pregnancy, terminating fatally in eight-and-forty hours, without any encysting having taken place. In this case the rupture took place in the fourth or fifth week after conception, which is much earlier than we observe it in spontaneous rupture; excessive fatigue also brought on metrorrhagia the first day after conception; we may, therefore, regard this as the predisposing cause, while excessive coitus seems ultimately to have ruptured the cyst, and so acted traumatically.

CASE X.*—*Old-standing peri-metritis; tubal pregnancy; venereal excess; intra-peritoneal hæmorrhage; death in forty-eight hours.*

A. L., aged 28, was admitted into the *Hôpital S. Antoine* 12th of August, 1859. Has enjoyed good health. She began to menstruate at 15. Was married at 17, and has had two children. Suffered a good deal from leucorrhœa during lactation. Was treated with steel chiefly. Three years after her accouchement she consulted M. Valleix, who recognised a displacement of the uterus, and she used a pessary, but has never since been really well. After her second pregnancy she had peritonitis, and was treated by leeching and mercurial and belladonna ointment. This sallivated her. Sexual intercourse was painful. Has suffered from indigestion and flatulence. She has been worse since the 9th of August. In the evening of the 11th her pulse was small, 120, skin hot, thirst, vomiting, abdominal distension and pain on pressure. Twenty-five leeches were applied, poultices and Neapolitan ointment, with opium pills internally.

On admission there was a good deal of fever; increased sensibility of the abdomen and pelvis; the enlarged cervix uteri was pushed posteriorly, the uterus itself being anteflexed, and adherent on the right. She left the Hospital, and was readmitted on the 14th of November.

The day previously she over-exerted herself, and at night, while in great pain she had sexual intercourse six times, after which she fainted. On admission the pulse was 150 small, the extremities cold, the surface pale; the cervix uteri was forwards; in the posterior *cul-de-sac* was a body which felt like the fundus. The general symptoms were those of internal hæmorrhage, but no hæmatocele could be detected. Rectal examination was very painful. Ordered opium and wine. She died on the 15th.

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* Siredey. *Thèse inaugurale.* Paris, 1860, p. 98.

On *post-mortem* examination, the abdomen was much distended, and on opening it a quantity of black liquid blood escaped. The pelvis was full of blood. The viscera generally were in an ex-sanguine condition. The uterus was lying in the hollow of the sacrum, and in front of it was a large quantity of blood. The left tube and ovary were adherent together, and rested against the left lateral half of the uterus, the tube being in front and below the ovary. The free orifice of the tube was not obliterated, and on pressing it some black fluid escaped.

False membranes united the ovary and Fallopian tubes to the broad ligament of the same side; they were much thickened. The ovary measured an inch and a half in length, and one inch in thickness. On the right side the ovary and tube were firmly united together, forming, with the uterus, a solid mass. The ovary was fully two inches long, and its pedicle short; the Fallopian tube of that side was thickened. The tumour contained some black blood, and a substance which at first looked like the débris of altered placenta. M. Robin considered that the embryo was from three to six week's growth. At the junction of the cervix and body of the uterus it was soft and flexible, and in its interior had all the appearance of the gravid state.

This case demonstrates that effusions of blood, however profuse, when seated in the true pelvis do not yield the indications of a tumour until the process of encysting has taken place, and formed a kind of solid base. In fact the author of the above case, though aware that internal hæmorrhage had occurred, could not find any tumour. This fact has an important bearing on diagnosis, and I have selected this case for this special reason, from numerous examples of rupture of the fœtal cyst in tubal pregnancy.

Interstitial tubo-uterine pregnancies terminate by rupture of the fœtal cyst, even more frequently than do tubal pregnancies. Dr. Menière* considers this their constant termination; but Dr. Payan's case, though also fatal, differs somewhat.

M. Jacquemier† indeed thinks that women have sometimes survived the bursting of the cyst into the uterine cavity. I am not

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* Menière. *Archives générales de médicine*, 1re série, 4e année, t. xi. p. 169.

† Jacquemier. *Manuel des accouchements*, t. i. p. 373.

acquainted with the facts on which he bases this opinion, and am obliged, like Dr. Menière, to consider the rupture of the cyst if not the constant at least the almost constant termination of this variety of extra-uterine pregnancy. Usually this occurs from the first to the third month of pregnancy, sometimes without appreciable cause, as in the remarkable cases of Dance,* Auvity (reported by Dr. Menière), and Gaïde†; sometimes from an external cause, blows or a fall, as in the case which we report of Alvers (de Brême).

Case XI.‡—A woman, aged 36, had a fall down stairs at the third month of her second pregnancy, September 19th, 1811. She became almost insensible from the fall, but managed to perform most of her ordinary duties that day. Syncope soon came on, and she was admitted; the journey to the Hospital causing extreme pain. She died next day.

Four days after, the *post-mortem* examination was made. The abdomen was filled with blood, and in the midst of the clot a small fœtus was found, apparently about nine weeks old. The uterus had all the appearance of gestation. The ovum had developed in that part of the Fallopian tube which adjoins the uterus, and this had caused such distension as finally to lead to rupture of that part.

No trace of the membranes could be discovered.

In these different cases, comprehending nearly all the varieties of extra-uterine pregnancy, rupture of the cyst has occurred at very different stages; if, however, we do not reckon the extreme cases where rupture took place at one and eight months, we shall see that it almost always happens between the second and fourth months, and this is a point of importance in diagnosis. All the patients were multiparæ; they all, except the one in Case X., p. 251, thought themselves pregnant, either from stoppage of the menses or from some other symptom of gestation.

A few of these pregnancies run a regular course, but they mostly show some irregularity, as malaise, debility, bad health, pains

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* G. Breschet. *Mémoire lu à l'Académie des sciences*, 1825.

† Obs. de M. Gaïde, service de M. Rayer, *Revue médicale*, t. xx. p. 321.

‡ Obs. tirée de Dezeimeris. *Journal des connaissances médico-chirurgicales*, t. ix. p. 243.

about the abnormal seat of the pregnancy, sometimes various inflammatory attacks, evidently coinciding with the peritoneal lesions observed at the *post-mortem* examination, metrorrhagia almost always slight but continual, and, at times, increased in quantity.

I lay the more stress on this metrorrhagia, as it is comparatively infrequent in those cases of extra-uterine pregnancy which terminate in a cure, and is still more rare in the first months of normal pregnancy.

The rupture then most frequently happens about the time when the metrorrhagia has diminished or quite ceased, often spontaneously, and without any known cause: at other times it follows some traumatic injury, as a blow on the stomach (Case VIII. p. 249), a fall down a staircase (Case XI., p. 253), excessive fatigue or venery (Case X., p. 251).

The actual rupture is usually announced by sharp, often agonising, pain at the hypogastrium, followed immediately by one or more terrible fits of syncope, often of long duration, and sometimes repeated: then general rigors supervene, the belly becomes tympanitic, or changes its shape if the pregnancy is slightly advanced: excessive debility, fainting, often vomiting, and sometimes convulsions herald death, which takes place in a short period, varying from eight, ten, or twelve hours to three or four days, the patient not losing consciousness.

In a very few exceptions the hæmorrhage stops, the product becomes encysted, and life is prolonged for some weeks or months (Case IX., p. 250).

The rupture of the fœtal cyst sometimes happens less abruptly, and the events take a less rapid course, the perforation being occasionally preceded by pain for some hours or days. Thus, in Albers' case, after the fall the patient lost consciousness, and in spite of her altered expression and appearance, and the persistent pains in the abdomen and at the sacrum, she continued to work about her house the whole day; it was not until the evening that a sudden fit of syncope and icy chills were followed quickly by death. It is evident that the intra-peritoneal hæmorrhage took place at this last moment, and it is a plausible hypothesis, though it cannot be actually demonstrated, that the pains in the belly and sacrum, as well as the loss of consciousness which followed the fall, are referable to separation of the placenta and hæmorrhage, which at first distended and finally ruptured the cyst.

In some cases, on the other hand, the successive events have taken place more slowly, and been observed more completely. Repeated hæmorrhages have occurred in the fœtal cyst, and a tumour has been formed which as the cyst distended burst into the peritoneum or brought on death without opening into the abdomen.

These facts demonstrate one of the modes in which fœtal cysts rupture. We must not, however, imagine that they always terminate in this way; on the contrary, there is so much difference between the progress and duration of the symptoms in those cases where intra-cystic hæmorrhage occurs slowly and at successive bursts, and those where it terminates as in the preceding cases, that I have thought it best to describe them separately, and to group them under the fifth head.

Section V.—Intra-pelvic hæmorrhage within the fœtal cyst.

This division is the more justifiable, because in the case where the intra-cystic hæmorrhage ended with the rupture of the fœtal cyst, the longest period of the disease was where one or more hæmorrhages took place into the cyst, while the rupture was only the termination of a series of well-marked events. Besides, we shall see that this end is not absolutely necessary. In some cases it seems to have been determined by accidental circumstances, and sometimes after a considerable interval. This stage of the disease, during which hæmorrhage occurs in the cyst without causing rupture deserves the more attention, as the effused blood always becomes encysted, contrary to what we have observed in the preceding cases. It forms a tumour, which by its seat, its form, and its character, presents more or less completely the physical characteristics of peri-uterine hæmatocele. We may remark also that these tumours have frequently during life, and even sometimes at the *post-mortem* examination been mistaken for hæmatoceles, although they differ so widely in their symptoms, as well as in their mode of formation and their etiology. Therefore, though the diagnosis may be difficult, it can generally be worked out.

In cases of this kind the tumour will be either intra- or extra-peritoneal, according to the seat of the extra-uterine pregnancy.

The case of M. Nonat (Case II., p. 238) has already given us an example of hæmorrhage into a sub-peritoneal fœtal cyst without rupture of the cyst.

The following case, published by M. Gallard, is one of those rare examples of intra-cystic hæmorrhage occurring in the course of sub-

pelvi-peritoneal pregnancy. The cyst, in truth, ended by rupturing into the peritoneum; but this event, supervening on the action of an injection made into the cyst, must not be attributed either to the spontaneous progress of the disease, or to a fresh hæmorrhage: for, on the one hand, only sanguineous serum was found in the peritoneum, and, on the other, the clots of blood in the tumour were all similar, and seemingly not referable to successive hæmorrhages. A perusal of the case will enable us to form an opinion on these points.

Case XII.—*Extra-uterine pregnancy; metrorrhagia; retro-uterine tumour; puncture and injection; peritonitis; death; post-mortem examination.*

M. R., aged 32, was admitted into the *Hôpital Beaujon*, November 3rd, 1854. She had always enjoyed good health. At 14 she began to menstruate without difficulty, and since then she has continued regular, but has had occasional pains in the loins and pelvic regions, which at times have required the use of leeches. Twice, these attacks were more serious, and were accompanied by abdominal distension, fever and delirium, but yielded to local depletion. Menstruation has always been quite regular since her marriage. Early in August menstruation came on scantily, accompanied by uterine colic and lumbar pain; these symptoms continued for three days, the discharge being almost *nil;* and were succeeded by an attack of metrorrhagia. The pains then ceased, but the hæmorrhage continued for a month, and was increased in September; the abdomen was neither painful nor tender, and there was no vomiting or fever.

At the end of September the pain became much more severe, but was relieved by purgation, the discharge continued and the abdomen increased in size.

Early in October the pains and the hæmorrhage were renewed, and ice was applied to the vagina to check the latter; this it did, but only at the cost of increased suffering. By the latter end of the month all seemed to have passed off again. But, on the 29th she took a long walk, and was extremely fatigued in the evening; the pains returning again with great severity though the discharge kept off. From that time up to her admission, this was in general all the treatment that had been adopted, rest, light diet, emollient applications and injections.

On the 5th of November it was noted that the abdomen was distended as large as at the seventh month of gestation; tender, tympanitic at

the upper part, dull at the lower, where also a non-fluctuating tumour could be felt, not adherent to the right iliac fossa; the cervix was not large, was directed to the left and in front behind the pubis; the posterior *cul-de-sac* was occupied by a tumour, soft and fluctuating, not tender on pressure, nor hot; it was continuous with that felt in the hypogastrium; the uterine sound was not used; there was nothing remarkable about the patient's general condition.

On the 6th M. Robert punctured *per vaginam* the fluctuating part of the tumour. A small quantity of fluid blood escaped, and continued to do so during the day, to the evident comfort of the patient. Next day it was injected with warm water, which brought on extreme suffering in the hypogastrium. The injection was accordingly suspended, and eight leeches were applied; she had rigors and vomiting, and the pain continued; ten leeches were then applied, followed by mercurial inunction, and calomel internally, but she died in a few hours.

At the *post-mortem* examination the abdomen contained a good deal of bloody serum. A tumour existed in the right broad ligament, pushing the uterus to the left. Behind the uterus was a cyst containing a fœtus of about five or six inches in length. It must have been a six-months fœtus at least; it was soft and even putrified. Besides this there was another tumour behind the body and cervix-uteri, and extending as far as the tumour in the broad ligament; it was spongy, infiltrated with blood and seemed like placenta. The fimbria of the right tube, the ovary, and the peritoneum of the recto-vaginal *cul-de-sac* could not be made out. All the surrounding cellular tissue was hardened; the left ovary was sound.

MM. Foucher and Guyot drew the following conclusions from this case:—

1. That the tumour situated in the right broad ligament was the placenta and that it communicated with the cyst behind the uterus. 2. That the internal surface of this cyst was lined with a shining layer of membrane, whether peritoneum or chorion could not be determined. 3. That the right tube was obliterated at about two inches from the corresponding cornu, but where the ovary and fimbria of that side were it was impossible to say.

I consider the title of intra-cystic hæmorrhage fairly given to this case. For, on the one hand, the smooth polished membrane which lined the internal surface of the cavity, and which, no doubt, represented the chorion, abundantly proves that the hæmorrhage

took place in the cyst itself: on the other hand, the situation of the tumour formed by the placenta in the right ligament, and the collection of blood which was contained in the recto-vaginal wall, show that the tumour was sub-peritoneal.

Lastly, M. Gallard, who quite recognised the situation of the mass, traced the communication of this cyst with the peritoneal cavity by a rent situate behind the left horn of the uterus.

It seems plain then that in this case the *locus hæmorrhagicus* was, as the author of the case himself points out, sub-peritoneal and formed by the fœtal cyst itself.

Moreover, the symptoms seem especially to point to this situation. And although the mucous membrane of the vagina did not present the abnormal colouring which some physicians describe as a symptom of hæmatocele, and especially of sub-peritoneal hæmatocele, yet the perineum became prominent like that of a woman in labour, and by a combined rectal and vaginal examination, it was felt, that the two layers of the recto-vaginal wall were separated nearly up to the perineum. This is never observed when effusion takes place into the recto-uterine *cul-de-sac* of the peritoneum. At the same time the patient had not the so-called peritoneal aspect; the countenance expressed suffering, but was not anxious, the skin was warm, slightly feverish, while the pulse was strong.

These characters clearly indicate that the case was not one of intra-peritoneal effusion. We also see that syncope and peritonitis, which are indicative of rupture of the cyst, did not come on until after the injection of warm-water into the blood-cavity.

The last two phenomena are the only events observed in the following case, borrowed from M. Pize, which, although incomplete, shows clearly, that in some of these cases the hæmorrhage furnished by the placenta may occur in gushes, just as in some cases of internal hæmorrhage during ordinary pregnancy, and may even cause rupture of the maternal cyst without tearing the proper enveloping membranes of the fœtus.

Case XIII.*—*Extra-uterine gestation; acute peritonitis; swelling in the right iliac fossa; effusion of blood into the peritoneum; death; post-mortem examination.*

A woman was admitted into *la Charité* under the care of M. Piorry, suffering from sub-acute peritonitis. A tumour could be

* *Bulletins de la Société anatomique*, année 1853, p. 40.

felt in the right iliac fossa. She died five or six days after admission. At the *post-mortem* examination blood was found effused into the peritoneal cavity; there was no pus or false membrane. A large tumour was found in the right ovarian region, formed of stratified coagula, ruptured at one point, whence the blood had escaped, looking in short very much like a ruptured aneurism. At the top of the tumour was a cyst containing a perfectly formed fœtus, of about the tenth week. The uterus presented all the appearance of the unimpregnated state, and certainly contained no decidua. The left tube and ovary were healthy. The right ovary was lost in the mass of coagula, &c.; the uterine orifice of the right tube was completely closed. The case was, I believe, one of tubal gestation, taking the following course: a fecundated ovule was developed in the right tube; this led to a great afflux of blood to the part, and the vessels ruptured from simple distension. The hæmorrhage being at first slow, the blood coagulated as it flowed, then a more violent loss came on, and the half-organised fibrous cyst ruptured, the blood escaped into the peritoneum, and death ensued.

This case, as there is no history attached, is only of use to show the way in which some of these hæmorrhages are produced, and how we may sometimes fail to recognise the placenta at the *post-mortem* examination, owing to its disorganisation, and thus be led to a false interpretation of the symptoms. This happened in the following case. As far as I know, it is the only example in which hæmorrhage into an intra-peritoneal fœtal cyst was observed during life, and it is precisely on account of this fact, and of its situation in the recto-uterine *cul-de-sac*, that the tumour formed by the extra-uterine pregnancy might have been readily taken for a retro-uterine hæmatocele.

Case XIV.*—*Tubo-abdominal pregnancy; metrorrhagia; successive hæmorrhages into the fœtal cyst; peritonitis; probable rupture of the cyst, and fœtal hæmorrhage.*

Q. M., aged 32, was admitted into the *Hôpital de la Pitié* on the 18th of March. She began to menstruate at 15, and had five children, the last two and-a-half years ago. On the 20th of January, 1853, being a week behind her monthly period, a severe hæmorrhage

* Obs. de M. Gaube. *Bulletins de la Société anatomique*, 28e année, 1853, p. 120.

came on, and continued up to the time of her admission into the Hospital. From the 18th to the 20th of March the bleeding became more severe, and was attended by a good deal of pain. The uterus on examination was found to be low; the labiæ large, congested and heavy; cervix open. On the 1st of April twenty leeches were applied to the hypogastrium with marked benefit. On the 2nd a tumour was felt all round the uterus, compressing the bladder, and rising an inch, or an inch-and-a-half above the Fallopian ligament of the left side. Thirty leeches were applied. April 3rd, tenesmus; the tumour increasing; no fluctuation. 4th, diarrhœa. Pulse, 128, feeble; abdomen distended.

Diagnosis; probably retro-uterine blood tumour with partial peritonitis.

The patient gradually got worse, and died on the 8th.

On *post-mortem* examination some small clots were found in the abdominal cavity. The pelvis was entirely filled with a tumour, which rose above the pubis in front, and the sacrum behind; on the anterior part of it was the fundus uteri. The ovary on the right side, slightly enlarged, was in contact on its posterior aspect with the Fallopian tube. The body of the uterus was larger than usual. Its lining membrane was perfectly natural, both as to thickness, colour, and structure. The orifices of the tubes, especially the right, were dilated. Behind the tumour before-mentioned, which was mostly covered with peritoneum, was a large pouch, and off this was a smaller *cul-de-sac* between the root of the uterus and the anterior part of the tumour. A crucial incision was made over the anterior and upper part of the tumour, which exposed a red mammillary-looking mass, easily separable from its containing sheath. Further examination discovered a fœtus within this, and so proved that what had been supposed to be a retro-uterine tumour was in reality an extra-uterine pregnancy. A large quantity of coagula coexisted with this. The fœtus was placed to the left side, and was flattened between the cyst wall and a large clot; it measured about four or four and-a-half inches, and was perfectly formed for a fœtus of about three months, which corresponds with the time (January) when menstruation ceased. At the point where the dilated right Fallopian tube joined was an opening of about three-quarters of an inch, through which the dilated tube might be inflated to the size of a turkey's egg, and was of a bilobular shape. On opening the tube some coagula were found in it, which clearly explained the

mechanism of the hæmorrhage. The orifice of the tube, as well as its interior, was lined with a thin delicate, but very red, membrane. The point to be determined, was whether the bloody tumour and the fœtus were beneath the peritoneum, or were inside that membrane. M. Nelaton did not at the last believe it to be sub-peritoneal, though at first he did—this was before seeing the fœtus. And the very slight resistance which existed at the upper and lateral part of the mass led me to the same conclusion. More careful dissection of the lower parts satisfied me that this was correct.

There are two points to be noticed more particularly in this case. 1. The absence of any rupture of the Fallopian tube discoverable at the *post-mortem* examination; and 2. The presence of hæmorrhage within the tubo-abdominal fœtal cyst. This last point is shown by the smooth polished membrane which enveloped both the clots of blood and the fœtus; by the umbilical cord retaining its insertion in a kind of appendage continuous with the enveloping membrane; and lastly, by the preservation of the peritoneal recto-uterine *cul-de-sac*, which, to the right and left of the tumour, at its lower part, admitted the finger, and was quite free from any adhesions, so that M. Gaube was able to dissect the peritoneal layer and follow it to the posterior wall of the uterus. That the pregnancy was tubo-abdominal is shown by the fact of the dilated right Fallopian tube; by the existence of the fine membrane forming the cyst, the rupture of which opened the communication between the collection of blood and the Fallopian tube; and, lastly, by the development of this cyst which, though delicate, was strong, and had contracted only slight adhesions with the intestines which readily yielded to gentle traction.

The details of the *post-mortem* examination do not show whether there had been a rupture of the cyst, and consequently we cannot determine the source of the internal hæmorrhage which, as it happened on the very morning the patient died, left a layer of bloody coagula covering the upper surface of the stomach and intestines. From the doubt which exists as to the seat of the hæmorrhage we compare this case with those of MM. Nonat, Gallard, and Pize,* and we shall find that there is an exact resemblance be-

* The following case would lead us to suppose that the rupture of the cyst preceded the hæmorrhage by eight days, but the details are

tween them, both in their pathological anatomy and in their symptoms; and on these points they differ entirely from rupture of the Fallopian tube or of the fœtal cyst. If we study these cases together it will aid us to diagnose between them and hæmatoceles with which they have hitherto been confounded.

I do not attach much importance to the question of the signs of pregnancy, for all the cases are silent on this point. But we should not therefore conclude that they did not exist, for they do not appear to have been looked for, and they certainly are present in analogous cases which I have reported.

The cessation or delay of the catamenia is, however, a point to be noticed, it varied from three to seven days, and in one patient after a delay of this kind hæmorrhage succeeded, and she fancied abortion had taken place. We ought, however, in strictness, to speak of suppression rather than of retardation of the menses; for these metrorrhagias which are so common in extra-uterine pregnancy are not menstrual at all, and ought not to be confounded with that flux. As long as the losses continue, sometimes more, sometimes less, they are accompanied with little or no pain, but when a considerable loss occurs, then sharp pains like those of labour follow, but they do not occur regularly.

Further, we find that at the seat of pregnancy there was a fixed pain more or less sharp, with some swelling situate either outside the uterus (see Case II.), or adjacent to that organ (Case XIV.). The sharp pains in the lower belly usually come on just as the loss of blood diminishes, and sometimes only when it entirely ceases; they are generally quite local, not acute, in no case are they very extreme, nor are they accompanied by either syncope or faintings, which is the more remarkable as I have constantly noticed this symptom in ruptures, both of the cyst and of the Fallopian tube. About this time the tumour enlarges, and its volume increases; it extends

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too brief to admit of certainty, I abridge its report by Vieussens (*Histoire des maladies internes.* Toulouse, 1775, t. iii. p. 17). A multipara, aged 30, not suspecting that she was again pregnant because she had some losses of blood from time to time, was seized with syncope, failing pulse, and cold sweats. She recovered in two days after appropriate remedies, when eight days later she was again seized with vomiting, syncope, cold extremities, and died in five hours. At the *post-mortem* examination the uterus was in an unimpregnated condition, the belly was half filled with blood, clotted and fluid, amongst which a two months fœtus was found.

usually more to one side than the other; and sometimes at the beginning it only occupies one side. It increases in volume sometimes rapidly and at once (Case XII.), sometimes by successive bursts as it were (Case XIV.). But the pale, altered expression, and the frequent pulse are not remarked, until the size of the tumour is considerable. Still later, the characteristic phenomena of peritonitis either general or local supervene, and always after the formation of the tumour; in M. Aran's case at two days; in M. Gallard's case at six days, and after the injection of water into it. It is of importance to note the period when these symptoms appear; there is tympanitis, dyspnœa, frequent and small pulse, vomitings, and abdominal tenderness; these generally show themselves after the tumour has developed: while, on the contrary, in cases of intra-peritoneal hæmatocele and pelvi-peritonitis, they always precede its formation. These symptoms may, however, improve, no matter how grave they may be at first, as in the case of M. Aran: possibly even a cure may result, though I cannot quote an example. I need not stay to discuss the termination of these cases, because in all of them death has occurred, though in different ways. In one, for instance, the fatal issue was brought about by rupture of the cyst and general peritonitis, the result of injections into the tumour; in two other cases death ensued from intra-peritoneal hæmorrhage, in one of which the cause was rupture of the ovary, in the other it was unknown; in the fourth case the rupture of the fœtal cyst was the result of hæmorrhage into the cyst, and general peritonitis preceded death.

The physical signs furnished by abdominal palpation and vaginal examination, by which we estimate the volume, consistence, and situation of the tumour are important; though the information they afford is not of so much value as one would suppose, they vary a good deal according to the seat of the cyst. Thus, in M. Aran's patient, the physical signs furnished *per vaginam*, though indistinctly marked, showed at the first a tumour situate more to the right side, and forming a kind of roof in the pelvis, which increased from time to time. In the case of M. Gallard, on the contrary, prior to any peritoneal complication, it was found that the tumour had dissected the recto-vaginal wall and extended nearly down to the perineum, pushing the neck of the uterus upwards and forwards behind the pubis. This is plainly not the form usually taken by peri-uterine hæmatocele, but in the first of these two cases the physical characters were not sufficient by themselves to form a diagnosis. In the second,

on the contrary, they sufficed to show that the tumour was sub-peritoneal, a character alone sufficient to lead us to a diagnosis, for we have already seen that sub-peritoneal blood tumours, called, whether rightly or wrongly, hæmatoceles, belong either to normal or abnormal pregnancies.

Amongst other physical signs I shall only observe, that in all the cases of extra-uterine pregnancy the uterus was larger than normal: but I do not attach much importance to this, because it is a thing difficult and sometimes impossible to be certain of.

But though I do not consider either the form of the tumour or the other physical signs at all pathognomonic, yet it is evident that they differ widely from hæmatoceles in the pre-existence of symptoms peculiar to pregnancy, in the antecedent metrorrhagia, the slight premonitory symptoms, and the existence of a large tumour before any peritonitis appears. Lastly, the absence of syncope, the slow progress of the disease, the non-occurrence of the signs of internal hæmorrhage, distinguish these cases from the other terminations of extra-uterine pregnancies.

CHAPTER II.

DIAGNOSIS.

It has usually been thought impossible to diagnose extra-uterine pregnancy during the first months of gestation. I think, however, that an attentive study of the different cases will enable us to lay down some rules of diagnosis. We find generally a combination of signs, none of which by themselves are pathognomonic, but which leave no room for doubt when taken together. The grounds for this diagnosis are, the ordinary signs of pregnancy, especially the suppression of the menses; the existence of metrorrhagia, usually persistent; the increased volume of the uterus; and lastly, the presence of a peri-uterine tumour. Undoubtedly the concurrence of these two sets of symptoms should at least make us suspect the existence of extra-uterine pregnancy, and this suspicion will grow into a certainty when the complications of rupture and internal hæmorrhage supervene. I attach great importance to the phenomena which precede these hæmorrhages, and which alone help us to a correct diagnosis.

Almost all the patients whose cases I have quoted believed themselves to be pregnant, sometimes even against the opinion of the physician (Case VI., 247) nor ought we to refuse a certain value to this belief, for most of these women had already had several children. So general indeed was this impression among the patients, that there were only four who had not suspected or rather had not declared themselves to be pregnant.*

In all but two the menses were suppressed, but the existence of metrorrhagia induced the belief that menstruation was only delayed, because the points in which the one differs from the other were not

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* We do not here reckon the two Cases X. and XIII. whose histories are altogether imperfect.

taken into account, especially the defect of periodicity on which Madame La Chapelle wisely lays stress.

In only two of these patients, as I have said, menstruation was not suppressed (Cases II. and XII.); the explanation however, is easy, for in both, the rupture of the cyst or of the ovarian veins happened in the fourth or fifth week after conception; moreover, both these women had metrorrhagia from the commencement of their pregnancy, and in their case this was suspicious. Indeed, these losses have always, and with good reason, been regarded as affording evidence of extra-uterine pregnancy: in the cases I have reported metrorrhagia was so frequent that it may almost be considered as constant, since there were but six cases in which it was not noted. Its long duration, the quantity at times, its want of periodicity, the little influence of rest or remedies upon it, the absence of those nervous phenomena which usually accompany menstruation, and the presence of pain, which increases in proportion to the profuseness of the bloody discharge; these will generally prevent our confounding it with ordinary menstruation.

It is unnecessary to remark upon the well-known signs which induced these patients to consider themselves pregnant. In some, all the usual signs of pregnancy were present, even in those where they had not been suspected, or where the physician had neglected to look for them. Besides the state of the breasts, the disturbed digestion, &c., it is generally found that the uterus is enlarged, and this in conjunction with other symptoms, rather suggests the idea of normal pregnancy, were it not for the fact, that at the same time a tumour can be made out either annexed or adherent to the uterus, and very frequently as it developes it thrusts the uterus more or less out of its normal direction.

This tumour is so palpable to a practised observer that it has been made out even in a pregnancy of barely a month, as in the case of M. Siredey (Case X.). But the finding of a tumour posterior and adherent to the uterus, though separated from it by a groove, had in that case little diagnostic value, because the patient had only just recovered from peri-pelvic peritonitis, a condition which, as we shall see, would yield very much the same symptoms. Though this sign taken by itself has but small value in this particular case, its significance is much more important when associated with other signs, especially with the coexistence of metrorrhagia,

occurring for nearly a month in a woman who had no "show" either before or during the course of the pelvic peritonitis.

I am inclined to lay great stress upon this point because I regard the establishment of an extra- or peri-uterine tumour before the occurrence of any symptom of internal hæmorrhage as a cardinal fact in diagnosis, the only one indeed by which we can distinguish hæmatoceles of this kind from those which take place in the course of normal pregnancy; but fortunately this sign is not absolutely needed in practice. We have seen that, ordinarily, internal hæmorrhages occur in extra-uterine pregnancies during the first, sometimes in the second or fourth, months; whereas the few examples of hæmatocele occurring during normal pregnancy have taken place eitheir in labour or during the latter months of gestation, and consequently at a period when there was no difficulty in diagnosing the existence of pregnancy; but with the exception of two cases, I have never met with these complications coincident in point of time with the menstrual period, which is the time when hæmatoceles so generally occur in the unimpregnated condition, and in all kinds of pelvi-peritonitis.

But even these two exceptions lose much of their value, because in the one (Case X.) rupture was the result of excessive coitus, and in the other (Case II.) the intra-peritoneal hæmorrhage was occasioned by rupture of the ovary, not of the fœtal cyst. I may add also that, except in the last case, the complications we are considering supervened only on the diminution, and often only on the complete cessation, of the metrorrhagy, which has wrongly been supposed to be menstrual. Pain is the only premonitory symptom of rupture. This pain, which has existed from the commencement of the pregnancy—far more acute than the ill-defined sufferings which women in general experience—remains usually in the same situation. Preceded or accompanied by pains in the back it is sometimes compared to a cord drawn across, sometimes to colic, sometimes to labour pains, in a word, without any special character, it is always excessively severe. Sometimes it comes on an hour or two before the rupture takes place, but more often it occurs exactly at the time, and is accompanied by a symptom which seems to be constant, no matter where the seat of rupture, whether vein, tube, or fœtal cyst; the symptom to which I refer is, syncope. Whatever be the cause of this phenomenon, whether we ascribe it to the acute pain caused by the rupture, or

to the great rapidity with which the profuse loss of blood takes place, we find it existing in all cases of rupture; whether in normal or abnormal pregnancy, or even in the unimpregnated state. Sometimes this syncope happens only once, but more often it is repeated, sometimes it is very prolonged, and complicated with debility and faintings. It is the first in the series of events which announce with certainty internal hæmorrhage, and is speedily followed by a small and frequent pulse, loss of colour, chilliness, sometimes convulsions, all of which precede the close of life; these last events, however, only point to more or less profuse internal hæmorrhage, while syncope furnishes other important diagnostic indications. It is generally wanting in the hæmatoceles which occur in the unimpregnated, provided they are not occasioned by rupture of ovarian varices, or of the Fallopian tube, or of the ovary. We are thus enabled clearly to differentiate between the hæmatoceles which we are now studying, and those of the metrorrhagic kind with which, by the presence, in both cases, of antecedent or concomitant uterine hæmorrhage, they may easily be confounded.

It is, as a rule, absent also in hæmatoceles from faulty menstrual excretion, but these cases will hardly give rise to any confusion; for if on the one hand the absence of the catamenia and some gastric disturbance raise a suspicion of pregnancy, on the other hand, the absence of any coloured discharge will prove the difference between them and hæmatoceles symptomatic of extra-uterine pregnancies, as these almost always give rise to lengthened metrorrhagy. There are, moreover, many other characteristic points in which the two affections differ: for example, the anæmia which is but slight in the first is, on the contrary, excessive in the second. The peritoneal complications, most severe in hæmatoceles from faulty excretion are less marked, sometimes even there is no time for their appearance in the second kind, as we shall see presently.

Lastly, syncope will help us to distinguish ruptures of the fœtal cyst from intra-cystic hæmorrhage, for as in the latter the hæmorrhage occurs more slowly, neither syncope nor even fainting results. The face becomes pale and loses its colour very slowly. Indeed, in M. Gallard's case, the value of this differential sign is proved by experiment, as absolute fainting only happened at the moment that the injection of warm water into the cyst caused its rupture, though there was no fresh hæmorrhage. It would therefore seem that in this case the syncope was dependent rather on the rupture than on the abundance or rapidity of the loss of blood.

I shall not discuss farther the diagnostic value of the signs of peritonitis since they are only seen in those relatively rare cases where death occurs slowly. Still it is worth remarking that in these cases the peritoneal complications are much less intense than one would, at first, have fancied; and the presence of blood in the peritoneum does not give rise to those formidable symptoms which are produced by effusion of the fluid of hydatid cysts, of pus, or of altered blood as Professor Trousseau has accurately remarked. These symptoms, moreover, do not differ at all from those observed in other kinds of hæmatoceles or in pelvi-peritonitis, and are only of use diagnostically when the time of their appearance is taken into account.

In fact, in those rare cases where life is prolonged sufficiently for inflammation to occur, the effused blood becomes encysted, and a tumour is formed which, whether it contains only blood, or a fœtus as well, may be a source of error. There is indeed no difference in situation, form, or physical characters between this tumour and that of simple hæmatocele; for which it might be mistaken, if the antecedents and progress of the disease were not duly weighed.

We must therefore remember that in these cases the tumour always follows the peritoneal complications. It is not formed, as the case of M. Siredey (Case X.) clearly proves, until the peritoneal adhesions have made a kind of cyst around the clot and formed a resisting envelope, without which the most profuse effusion of blood will not yield the sensation of a tumour to the touch, however careful the observer may be. This special characteristic of blood effusions, viz., that no distinguishable tumour is formed until after the peritoneal complications, is common alike to the other varieties of hæmatoceles and to pelvi-peritonitis, but it is altogether wanting in intra-cystic hæmorrhages, for in these cases, on the contrary, the increase of the tumour often precedes by many days the development of peritonitis. In some cases the sensation of a tumour may give rise to the opposite error, and lead us to consider the tumour formed by the fœtal cyst itself as a hæmatocele following the rupture of an extra-uterine pregnancy. There is a liability to this error in those cases where the fœtal cyst, owing to its position between the uterus and the rectum, presses on the bowel and bladder, and gives rise to symptoms peculiar to hæmatoceles as in the following case.

CASE XV.*—*Metrorrhagia for three months; hypogastric pains; difficult micturition and defæcation, vomiting, &c.; hypogastric tumour compressing the rectum; death; post-mortem examination; intra-peritoneal hæmorrhage; extra-uterine gestation.*

A woman, aged 39, was taken ill on the 29th of October, 1712, having previously had a bloody discharge for three months. She complained of great pain in the lower part of the body, difficult micturition and defæcation, with vomiting, fever, &c.

On examination a tumour was felt in the hypogastrium very tender to the touch; an aperient was ordered and some embrocation for the stomach. On the third day of the attack there was smart fever, a pinched expression, and cold clammy sweats. At first it was thought that these symptoms were indicative either of pregnancy, the child being dead and putrid, or that the uterus contained some decomposed blood. The patient denied being pregnant and on examination no sign of pregnancy existed: meanwhile the urgency of the symptoms increased, and the patient died on the fourth day of the attack.

On opening the abdomen a quantity of blood was found in the hypogastric region, and on clearing this away a large tumour was discovered in the lower part of the abdomen. Having opened the tumour I was greatly surprised to find that it contained a fœtus. It was situate more to the left than the right side, the placenta being in the former position, the uterus contained nothing but a few drops of blood; the left ovary and Fallopian tube were firmly adherent to the membrane which surrounded the child; the placenta was also adherent: I separated the orifice of the left Fallopian tube with great care, and on blowing into the tube, the air passed through into the uterus; the right ovary and the other organs were in a healthy condition.

Not knowing the symptoms which induced Duverney to suspect pregnancy in this case, in spite of three months' hæmorrhage, I cannot say whether it could have been diagnosed. Moreover, the reticence in the commencement of the report, so contrary to Duverney's usual custom, prevents one from putting much reliance on the denial of the patient.

I regret extremely that Duverney has not pointed out the

* Duverney. *Œuvres anatomiques*, t. ii. p. 357.

peculiar kind of sensation which this enormous tumour formed by the fœtal cyst gave rise to. An indication the more important, as the tumour, which was neither hard nor painful to the touch, occupied exactly the same situation as a hæmatocele would do. It was perceptible in the hypogastric region, it compressed the rectum and uterus, and thrust the latter forward. Some of the symptoms might also lead to an error in diagnosis, such as the difficulty of micturition and defæcation, the impossibility of relieving it, and the spontaneous pain and nausea. We may also note that the patient had no fever, that for three months she had had uterine hæmorrhage, and that it was only on the third day after the commencement of the symptoms, and after the establishment of the tumour, that the signs of internal hæmorrhage were manifested. This mode of progression, altogether different to that of hæmatocele, ought to have banished all idea of that kind. Moreover, the absence of syncope precluded the supposition of rupture of the fœtal cyst; and though we are ignorant of the source of the intra-peritoneal hæmorrhage, we know at least that neither the fœtal cyst nor the Fallopian tubes presented any rupture.

This case, while it shows some of the difficulties we have to contend with, indicates how far we may hope to arrive at a fair diagnosis by the study of the different symptoms, and especially of their order of occurrence jointly with the antecedents.

CHAPTER III.

PROGNOSIS.

While the difficulty, and often the impossibility of getting an exact history frequently prevents us from arriving at a full knowledge of the nature of a given case, we have, unhappily, no need of the like information to guide us in the prognosis. MM. Littré and Duverney did not hesitate in the cases I have reported to prognosticate a fatal issue. In fact, all the cases that I have quoted have terminated in death; generally it has taken place in a few hours or days, and though death has been delayed for six months, as in Case IX., it is wholly exceptional.

Nevertheless, Murat,* Cazeaux,† Chailly,‡ and Jacquemier,§ have pointed out the possibility of a happier result; and I have thought it right to examine the facts on which they found this opinion.

Murat indeed quotes two cases to support this view; one by Jacob (*London Journal*), which I have been unable to find, the vague details of which do not seem to me authentic: the other by Bianchi,‖ which is placed in the note below, though it is susceptible of a very different interpretation from that the author has assigned to it.

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* Dict. en 60 vols., art. *Grossesse extra-utérine.*

† Cazeaux. *Traité pratique des accouchements.*

‡ Chailly. *Traité pratique de l'art des accouchements*, 2e ed. p. 136.

§ Jacquemier. *Manuel des accouchements*, t. i. p. 381.

‖ Case by Bianchi. *De naturali in humano vitiosa morbosaque generatione. Historia externæ in ovario graviditatis indeque ventralis externæ in Taurinensi femina.*

A woman became pregnant for the third time, the abdomen enlarged more on the right side than in the mesian line, the pregnancy went on to the ninth month, when labour pains came on; the fœtus was distinctly felt through the abdominal walls, but no delivery followed. After a short time the woman resumed her occupations, and the menstrual flux returned. She contracted venereal disease, and died about fifteen years after the preg-

We see here a case of abdominal pregnancy, the fœtus dying at the ninth month, while the mother keeps her health; but there is not a symptom to justify the diagnosis of a rupture of the fœtal cyst, and the report of the *post-mortem* examination fifteen years later, shows that the cyst containing the mummified fœtus was intact.

The following case of Duverney reported by Bianchi * has been considered an example of recovery after rupture of the cyst, but the translator is in error.

"In the tubal conception, which M. Duverney met with and described, the fœtus underwent many changes and the tube dilated more and more, but fœtal laceration and effusion of blood did not follow (as the mother, on the evidence of the writer, died from fever brought on by quite another cause), because the fœtus was slowly absorbed just like a dead body laid up and dried, and the tunics of the (Fallopian) tube in the pregnant woman gradually becoming indurated, not only resisted rupture, but perhaps by continued pressure absorbed the growing fœtus."

This quotation seems to leave no doubt on the matter, since it is there stated that the tunics resisted rupture, and Bianchi adds in the same chapter that tubal pregnancy, followed by rupture of the Fallopian tube, is always fatal. Moreover, if we read the original case of Duverney,† we do not see any question raised either about rupture of the cyst or hæmorrhage. It is but too true, then, I fear, that we are authorised in saying that all the cases of intra-peritoneal hæmorrhage arising from extra-uterine pregnancy end in death. Some cases, nevertheless, as Case IX. for example, would give one slight hopes of a happier termination. Lastly, the long continuance of the disease in the cases comprising our fifth variety, its nature, and the example of the case of M. Gallard, are proof of the possibility of a cure; in this case we can well understand that the inherent difficulty in diagnosis may often cause us to doubt the existence of such an event, though we are unable to quote an example.

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nancy. On opening the abdomen the omentum was found united to the peritoneum by new delicate membrane as far as the pubes; next came a hard, dense, leathery membrane within which lay a fœtus with one foot and leg in a cyst, evidently the right ovary.

* Bianchi, *op. cit.*, p. 152.

† Duverney. *Mémoires de l'Académie royale des sciences*, année, 1702, p. 298.

CHAPTER IV.

TREATMENT.

We must not despair then of the possibility of a cure, however rare it may be, but should study the principal therapeutical indications. In the first place, as we find that all the interstitial or tubo-interstitial, and the majority of tubal pregnancies, end by a necessarily fatal rupture, we are led to ask whether the physician ought not to interfere in the first months of pregnancy. Unhappily, even if it be possible to suspect the existence of extra-uterine pregnancy, we must acknowledge that it is quite impossible to diagnose the different varieties of these abnormal pregnancies, and consequently it seems impossible to interfere in any case of this kind. Moreover, the few examples of surgical intervention that I know of, even those where recourse has been had merely to a simple exploratory puncture, are so unfortunate in their results as to deter any operator.* The case quoted by Duverney has nevertheless made me think that perhaps we might cause the death of the fœtus in the cyst by a current of electricity, just as attempts have been made on hydatid tumours; we should thus imitate the course nature follows to bring about a cure.

But we must leave hypotheses of this kind, which we cannot seriously advise, and turn to those more positive therapeutical indications. Absolute rest seems indicated by the metrorrhagia which most of the patients suffer for a long time before the occurrence to which it seems related and premonitory. On the one hand we know the influence that the horizontal posture has in the treatment of uterine hæmorrhage; and we ought to avoid those accidents which, as we have seen, sometimes bring about the rupture of the fœtal cyst or of the tube. I cannot as confidently advise the use of local applications for the metrorrhagias, which, as we have seen, did mischief in one of our cases (Case XII.), nor local blood-letting (Case XIV.), nor

* *Bulletins de la Société anatomique*, 30 annêe, 1855, p. 181.

derivative bleedings, in the absence of facts to prove their utility. On the contrary, the study of the causes in all these cases of extra-uterine pregnancy seems to indicate the necessity for absolute rest from the day when the metrorrhagia appears; and in all cases total prohibition of sexual congress must be enforced.

Once intra-peritoneal hæmorrhage has supervened, whatever be the cause, the first indication is to lessen it as much as possible; but unfortunately its cause compels the physician to resort merely to the use of general means, that is to say, perfect absence of movement, and the application of ice or cold water to the abdomen. Nor can I place much faith in hæmostatic or astringent medicines given internally; opium alone, as some physicians have thought that it possesses a hæmostatic power, should be given in full and frequent doses, for even if its anti-hæmorrhagic qualities are open to dispute, it has the advantage of soothing pain. I advise it the more confidently, as it seems in simple hæmatoceles by its sedative power and the calm it procures, to favour the formation of adhesions, or at least to diminish sensibly the pains of the local peritonitis.

General or local blood-letting, which I have seen used in many cases without benefit, appears to me to be formally contra-indicated by the loss of blood, which is already so great as sometimes to end in death. The only use it can be, is to prevent the peritonitis, but it not only does not hinder its development, but one may even ask whether it is not wrong to stay, even if it were possible to do so, the inflammatory action which is required for the healing process. Moreover, the symptoms of peritonitis are far less intense and urgent than we should suppose theoretically, and my cases, while they agree with the experience of MM. Trousseau and Leblanc, show that in them death was caused by the hæmorrhage and not by subacute or general peritonitis, of which we find no description in any of the *post-mortem* examinations. Nevertheless, while I think it right not to apply leeches, as being dangerous at the commencement, I quite recognise their usefulness in a more advanced stage.

When happily, though it be seldom, the patient has not succumbed under the profuse hæmorrhage, and when the clot is encysted, or the hæmorrhage has taken place into the fœtal cyst, without causing rupture, various indications present themselves. Fearing the rupture of the tumours which so often occur, and in order to relieve the patient of the symptoms due to its size, the question arises will it be right to make a puncture or incision in order to empty the tumour? The

few facts I know of prevent my answering this question as directly as I can in the case of hæmatoceles in the unimpregnated state. Still the fear of rupture of the fœtal cyst through successive hæmorrhages, as occurred in the case of M. Pize, will not settle the question of an operation, the results of which are at least indecisive. The example of puncturing practised on the patient of M. Gallard, if it does not quite condemn the operation, inasmuch as death was due to the injection of water and not to the puncture, certainly does not show that the operation gave any relief. Moreover, statistics prove that extra-uterine pregnancies in which the fœtus has died, more often end happily when the disease follows its natural course uninterrupted by the intervention of art. We ought, therefore, to hold back from any operation, at least until an advanced period when the surgeon may assist the work of elimination begun by nature. I am of opinion, therefore, that we must confine ourselves to an expectant treatment in the first stages, and continue to follow the same wise conduct in the later stages until observation points out the necessity for intervention.

As yet we are quite without facts from which to lay down formulæ for the indications to be followed in the last stage of the disease, and I must hold fast to the principle, which I have followed throughout this work, not to advance a proposition which is not borne out by the cases which I have now laid before the reader in as complete and entire state as possible.

END OF VOL. I.

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